API Well Number: 43047523160000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER
RW 15C1-23B

2. TYPE OF WORK
DRILL NEW WELL ■ REENTER P&A WELL ☐ DEEPEN WELL ☐

3. FIELD OR WILDCAT
RED WASH

4. TYPE OF WELL
Gas Well Coalbed Methane Well: NO

5. UNIT or COMMUNITIZATION AGREEMENT NAME
RED WASH

6. NAME OF OPERATOR
QEP ENERGY COMPANY

7. OPERATOR PHONE
303 308-3068

8. ADDRESS OF OPERATOR
11002 East 17500 South, Vernal, Ut, 84078

9. OPERATOR E-MAIL
debbie.stanberry@qepres.com

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
UTU082

11. MINERAL OWNERSHIP
FEDERAL ■ INDIAN ☐ STATE ☐ FEE ☐

12. SURFACE OWNERSHIP
FEDERAL ■ INDIAN ☐ STATE ☐ FEE ☐

13. NAME OF SURFACE OWNER (if box 12 = 'fee')

14. SURFACE OWNER PHONE (if box 12 = 'fee')

15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')

16. SURFACE OWNER E-MAIL (if box 12 = 'fee')

17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')

18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS
YES ☐ (Submit Commingling Application) NO ■

19. SLANT
VERTICAL ☐ DIRECTIONAL ■ HORIZONTAL ☐

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1736 FSL 2534 FWL	NESW	23	7.0 S	23.0 E	S
Top of Uppermost Producing Zone	476 FSL 2295 FEL	SWSE	23	7.0 S	23.0 E	S
At Total Depth	476 FSL 2295 FEL	SWSE	23	7.0 S	23.0 E	S

21. COUNTY
UINTAH

22. DISTANCE TO NEAREST LEASE LINE (Feet)
476

23. NUMBER OF ACRES IN DRILLING UNIT
1280

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
10090

26. PROPOSED DEPTH
MD: 11044 TVD: 10872

27. ELEVATION - GROUND LEVEL
5625

28. BOND NUMBER
ESB000024

29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE
A-36125/ 49-2153

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	12.25	9.625	0 - 3692	40.0	N-80 LT&C	0.0	Halliburton Light , Type Unknown	460	3.12	11.0
							Halliburton Premium , Type Unknown	230	1.47	13.5
I1	8.5	4.5	0 - 6239	11.6	HCP-110 LT&C	9.5	No Used	0	0.0	0.0
Prod	7.875	4.5	0 - 11044	11.6	HCP-110 LT&C	10.5	Halliburton Light , Type Unknown	460	3.12	11.0
							Halliburton Premium , Type Unknown	550	1.65	13.5

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☑ COMPLETE DRILLING PLAN
- ☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)
- ☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
- ☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)
- ☑ TOPOGRAPHICAL MAP

NAME Valyn Davis | **TITLE** Regulatory Affairs Analyst | **PHONE** 435 781-4369

SIGNATURE | **DATE** 01/30/2012 | **EMAIL** Valyn.Davis@qepres.com

API NUMBER ASSIGNED
43047523160000

APPROVAL
Permit Manager

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RECEIVED: February 14, 2012

QEP Energy Company
RW 15C1-23B
Uintah County, Utah
SHL: 1736 FSL & 2534 FWL, Section 23, T7S, R23E
BHL: 476 FSL & 2295 FEL, Section 23, T7S, R23E

DRILLING PROGRAM

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil & Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

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1. Formation Tops

The estimated top of important geologic markers are as follows:

Formation Name	TVD (ft, RKB)	MD (ft, RKB)
Duchesne River/Uintah	0	0
Green River	2789	2856
Mahogany	3640	3640
Estimated Btm of Mod Saline Water	5516	5684
Wasatch	6067	6239
Mesaverde	8243	8415
Sego	10572	10744
TD	10872	11044

2. Anticipated Depths of Oil, Gas, Water, and Other Mineral Bearing Zones

The estimated depths at which the top of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered as follows:

Formation Name (Substance)	Depth (ft, TVD)	Depth (ft, MD)
Green River (Oil)	2789	2856
Wasatch (Gas)	6067	6239
Mesaverde (Gas)	8243	8415
Sego (Gas)	10572	10744

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

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All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right A36125 (which was filed on May 7, 1964) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes. All water resulting from drilling operations will be disposed of at LaPoint Recycling and Storage in Section 12, T5S R19E of Uintah County, UT or Red Wash Disposal site; SESE, Section 28, T7S, R23E or West End Disposal Site; NESE, Section 28, T7S, R22E.

3. Operator's Specification for Pressure Control Equipment

A. An 11" 5000 psi double ram with blind rams and pipe rams, annular preventer and drilling spool or BOP with 2 side outlets.

B. All BOP connections subject to pressure shall be flanged, welded or clamped.

C. Kill line (2" min), 2 choke line valves (3" min), choke line (3" min), 2 kill line valves (2" min) and a check valve, 2 chokes with one remotely controlled from rig floor and a pressure gauge on choke manifold.

D. Upper and Lower Kelly cock valves with handles and safety valve and subs to fit all drill string connections.

E. IBOP or float sub available.

F. Fill up line must be installed above the uppermost preventer.

G. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 50 percent of internal yield pressure of casing whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc…, for a 5M system and individual components shall be operable as designed.

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4. Casing Design:

Hole Size (in)	Csg. Size	Top (MD)	Bottom (MD)	Wt. (ppf)	Grade	Thread	Cond.	Expected MW(ppg)
22	16	Sfc	40	Steel	Conductor	None	Used	N/A
12.25	9.625	Sfc	3692	40	N-80	LTC	New	Air
8.5	4.5	Sfc	6239	11.6	HCP-110	LTC	New	9.5
7.875	4.5	Sfc	11044	11.6	HCP-110	LTC	New	10.5

Casing Strengths						
OD (in)	Wt (ppf)	Grade	Thread	Collapse (psi)	Burst (psi)	Tensile (kips, min)
9.625	40	N-80	LTC	3090	5750	727
4.5	11.6	HCP-110	LTC	8830	10710	279

Casing Design Factors

*The casing prescribed above meets or exceeds the below listed design factors.

Burst: 1.2
Collapse: 1.2
Tension: 1.6

Maximum anticipated mud weight: 10.5 ppg
Maximum anticipated surface treating pressure: 7,200 psi

5. Cementing Program

9-5/8" Surface Casing:

	Lead	Tail
Top of Slurry (ft, MD):	0	3000
Bottom of Slurry (ft, MD):	3000	3000
Weight (ppg):	11.0	13.5
Yeild (ft^3/sk):	3.12	1.47
% Excess (Open Hole Only):	50%	50%
Volume (ft^3):	1410	325
Volume (Sacks):	460	230

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4-1/2" Production Casing*:

	Lead	**Tail**
Top of Slurry (ft, MD):	3000	8415
Bottom of Slurry (ft, MD):	8415	11044
Weight (ppg):	11.0	13.5
Yeild (ft^3/sk):	3.18	1.65
% Excess (Open Hole Only):	50%	50%
Volume (ft^3):	2046	902
Volume (Sacks):	650	550

*Final cement volumes to be calculated from caliper log, if run.

6. Auxiliary Equipment

A. Kelly Cock – yes

B. Float at the bit – Yes

C. Monitoring equipment on the mud system – PVT/Flow Show

D. Full opening safety valve on the rig floor – Yes

E. Rotating Head – Yes

F. Request for Variance:

Drilling surface hole with air:

A variance from 43 CFR 3160 Onshore Oil and Gas Order #2, Section III Requirements, subsection E. Special Drilling Operations is requested for the specific operation of drilling and setting surface casing on the subject well with a truck mounted air rig. The variance from the following requirements of Order #2 is requested because surface casing depth for this well is 50' or deeper into the Mahogany Bench formation and high pressures are not expected.

1. **Properly lubricated and maintained rotating head** – A diverter system in place of a rotating head. The diverter system forces the air and cutting returns to the reserve pit and is used to drill the surface casing.
2. **Blooie line discharge 100 feet from wellbore and securely anchored** – the blooie line discharge for this operation will be located 50 to 70 feet from the wellhead. This reduced length is necessary due to the smaller location size to minimize surface disturbance.

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RECEIVED: January 30, 2012

3. **Automatic igniter or continuous pilot light on blooie line** – a diffuser will be used rather than an automatic pilot/igniter. Water is injected into the compressed air and eliminates the need for a pilot light and the need for dust suppression equipment.
4. **Compressors located in the opposite direction from the blooie line a minimum of 100 feet from the wellbore** – compressors located within 50 feet on the opposite side of the wellbore from the blooie line and is equipped with a 1) emergency kill switch on the driller's console, 2) pressure relief valves on the compressors, 3) spark arrestors on the motors.
5. **Well Kill Fluid** – A suitable amount of water and weighting agents will be available in the reserve pit during air drilling operations to kill the well, if necessary. No overpressured zones are expected in the area.
6. **Deflector on the end of the blooie line** – QEP will mount a deflector unit at the end of the blooie line for the purpose of changing the direction and velocity of the air and cuttings flow into the reserve pit. Changing the velocity and direction of the cuttings and air will preserve the pit liner. In the event the deflector washes out due to erosion caused by the sand blasting effect of the cuttings, there will be no problem because the deflector is mounted on the very end of the blooie. A washed out deflector will be easily replaced.
7. **Flare Pit** – there will be no need of a flare pit during the surface hole air drilling operation because the blooie line is routed directly to the reserve pit. When the big rig arrives for the main drilling after setting surface casing, a flare box will be installed and all flare lines will be routed to the flare box.

G. Drilling below the 9-5/8" casing will be done with water based mud. Maximum anticipated mud weight is 10.5 ppg.

H. No minimum quantity of weight material will be required to be kept on location.

I. Gas detector will be used from intermediate casing depth to TD.

7. **Testing, logging and coring program**

A. Cores – none.

B. DST – none anticipated

C. Logging – Mud logging – Intermediate Casing to TD
OH Logs: GR-SP-Induction, Neutron Density.

D. Formation and Completion Interval:

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– Stimulation will be designed for the particular area of interest as encountered.

8. <u>Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards</u>

No abnormal temperatures or pressures are anticipated.
Maximum anticipated bottom hole pressure (approx, psi): 5936
Maximum anticipated bottom hole temperature (approx, deg F): 210

H2S has not been encountered in other wells drilled to similar depths in the general area.

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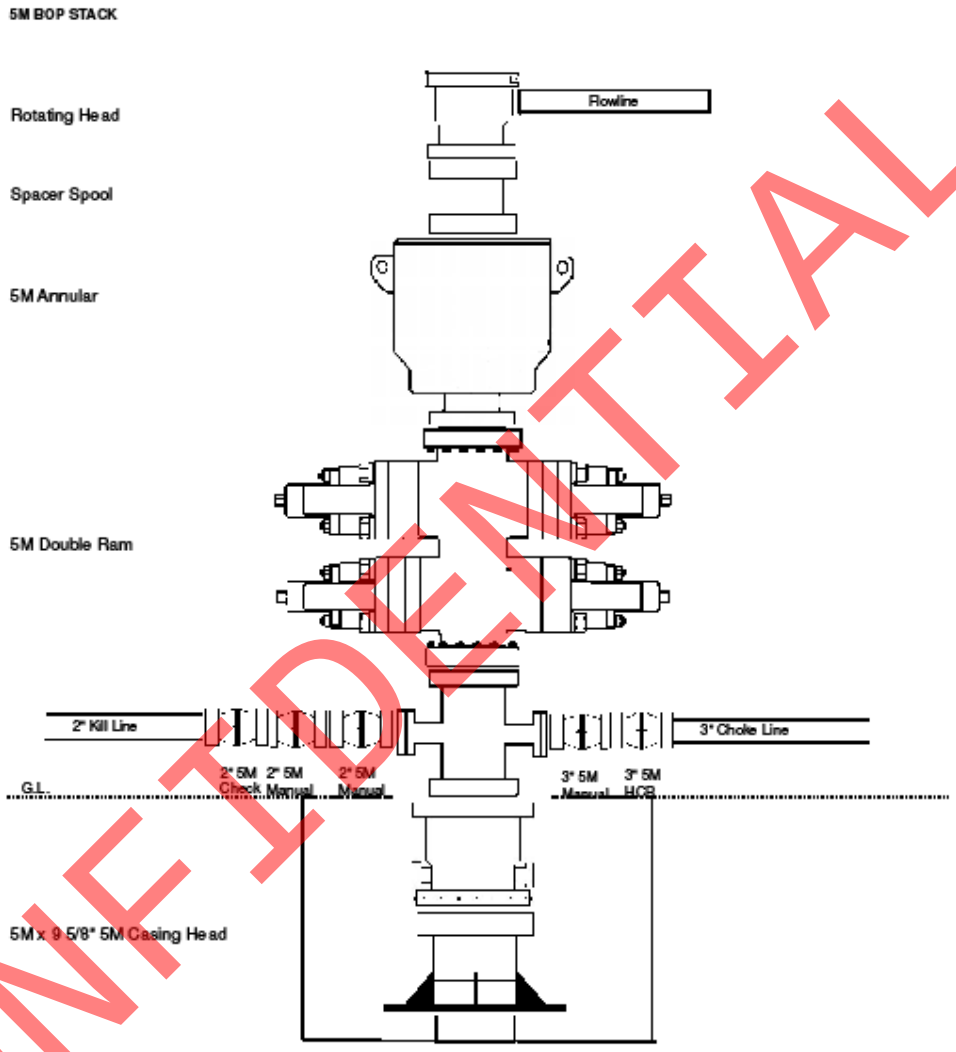

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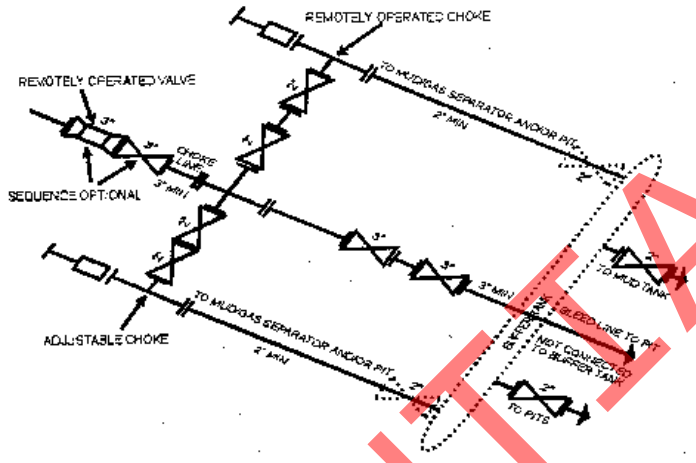

5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39523, Sept. 27, 1989]

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RECEIVED: January 30, 2012

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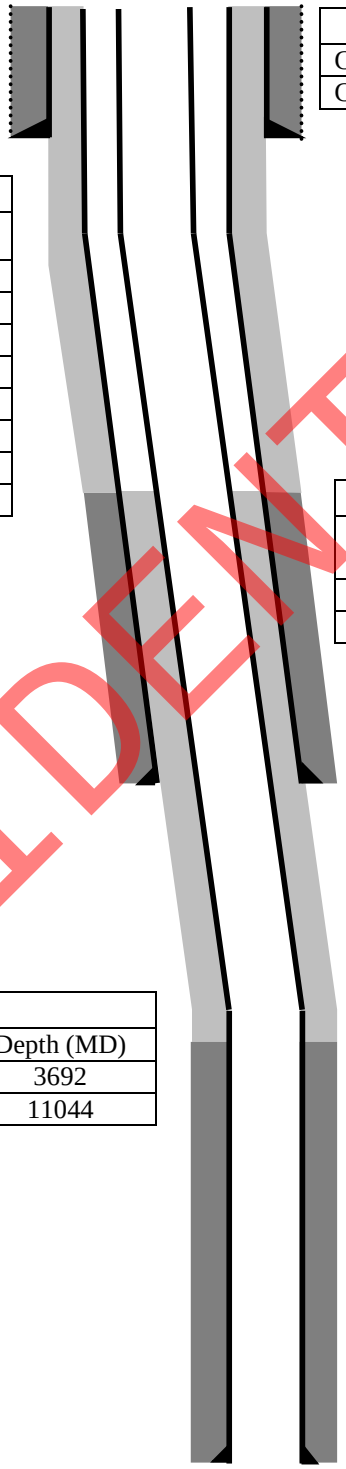
WELLBORE DIAGRAM

General Information	
Pad	23-23B
Pod	2
Elevation, GL	5625
Elevation, RKB	5641

Conductor Information	
Conductor set @	40
Cemented to Surface	



Geologic Prognosis		
Formation	**TVD**	**MD**
Duchesne River/Uintah	0	0
Green River	2789	2856
Mahogany	3544	3640
Est Btm of Mod Saline Water	5516	5684
Wasatch	6067	6239
Mesaverde	8243	8415
Sego	10572	10744
TD	10872	11044

Surface Cement			
	Top (MD)	Wt (ppg)	Volume (Sacks)
Lead	0	11	460
Tail	3000	13.5	230

Hole Size	From (MD)	To (MD)
12.25	0	3692
8.5	3692	6239
7.875	6239	11044

Directional Information		
KOP:	500	ft
Departure:	1337	ft
Azimuth:	160.43	deg

Casing Information				
Size	Wt	Grade	Connection	Depth (MD)
9.625	40	N-80	LTC	3692
4.5	11.6	HCP-110	LTC	11044

Production Cement			
	Top (MD)	Wt (ppg)	Volume (Sacks)
Lead	3000	11	650
Tail	8415	13.5	550

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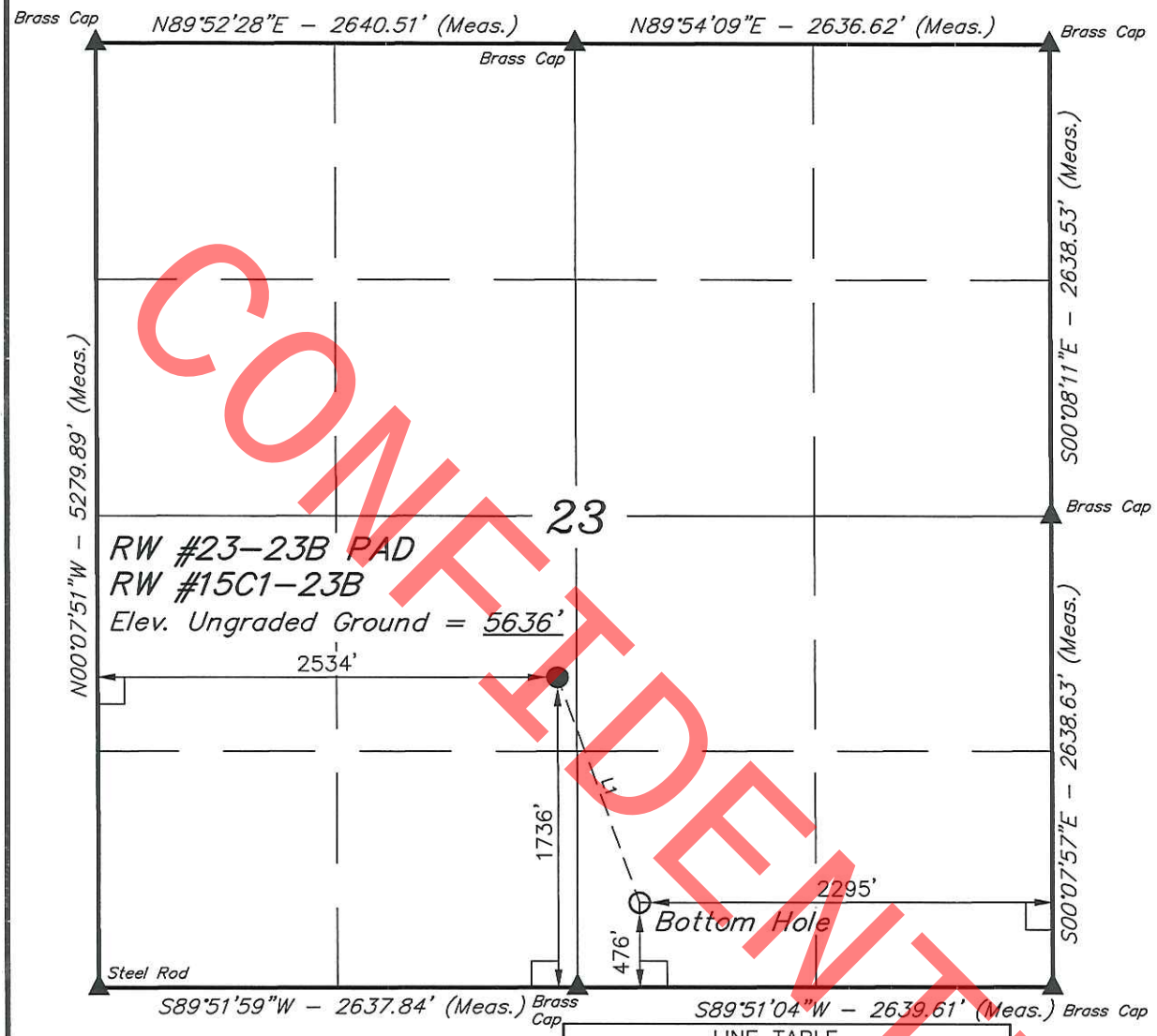
RECEIVED: January 30, 2012

T7S, R23E, S.L.B.&M.



LINE TABLE		
LINE	BEARING	LENGTH
L1	S19°41'40"E	1337.66'

QEP ENERGY COMPANY

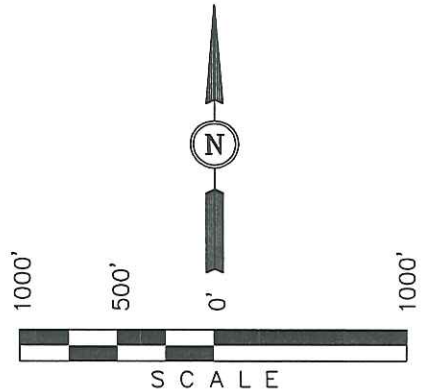
Well location, RW #23-23B PAD, Well Name RW #15C1-23B, located as shown in the NE 1/4 SW 1/4 of Section 23, T7S, R23E, S.L.B.&M., Uintah County, Utah.

BASIS OF ELEVATION

BENCH MARK (20EAM) LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M. TAKEN FROM THE OURAY SE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

12-21-11

REVISED: 12-21-11

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST – VERNAL, UTAH 84078
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 10-03-11	DATE DRAWN: 11-15-11
PARTY A.F. C.A.G.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE QEP ENERGY COMPANY	

LEGEND:

└ = 90° SYMBOL

● = PROPOSED WELL HEAD.

▲ = SECTION CORNERS LOCATED.

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 40°11'20.75" (40.189097)	LATITUDE = 40°11'33.20" (40.192556)
LONGITUDE = 109°17'35.14" (109.293094)	LONGITUDE = 109°17'40.91" (109.294697)
NAD 27 (TARGET BOTTOM HOLE)	**NAD 27 (SURFACE LOCATION)**
LATITUDE = 40°11'20.88" (40.189133)	LATITUDE = 40°11'33.33" (40.192592)
LONGITUDE = 109°17'32.69" (109.292414)	LONGITUDE = 109°17'38.46" (109.294017)
STATE PLANE NAD 83 UTAH CENTRAL	**STATE PLANE NAD 83 UTAH CENTRAL**
N: 7245209.590 E: 2256887.740	N: 7246458.167 E: 2256408.965

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API well Number: 43047523160000

API Well Number: 43047523160000

QEP ENERGY COMPANY

RW #23-23B PAD

LOCATED IN UINTAH COUNTY, UTAH
SECTION 23, T7S, R23E, S.L.B.&M.

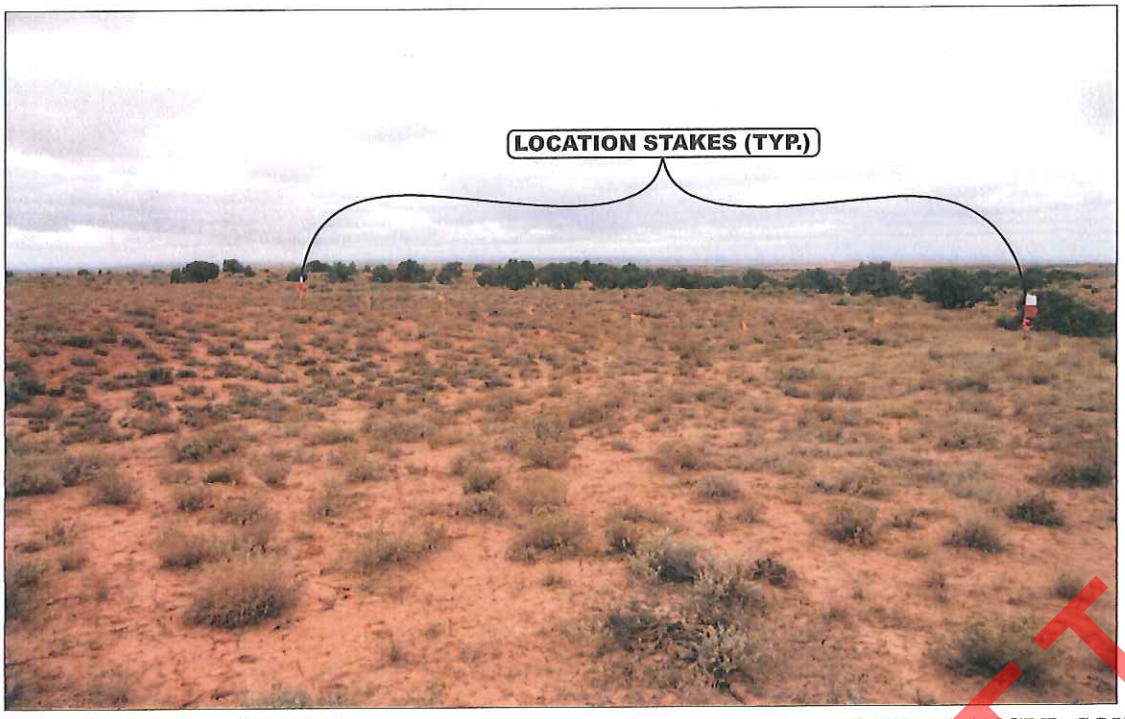

PHOTO: VIEW OF LOCATION STAKES **CAMERA ANGLE: SOUTHERLY**

PHOTO: VIEW OF EXISTING ACCESS **CAMERA ANGLE: SOUTHERLY**

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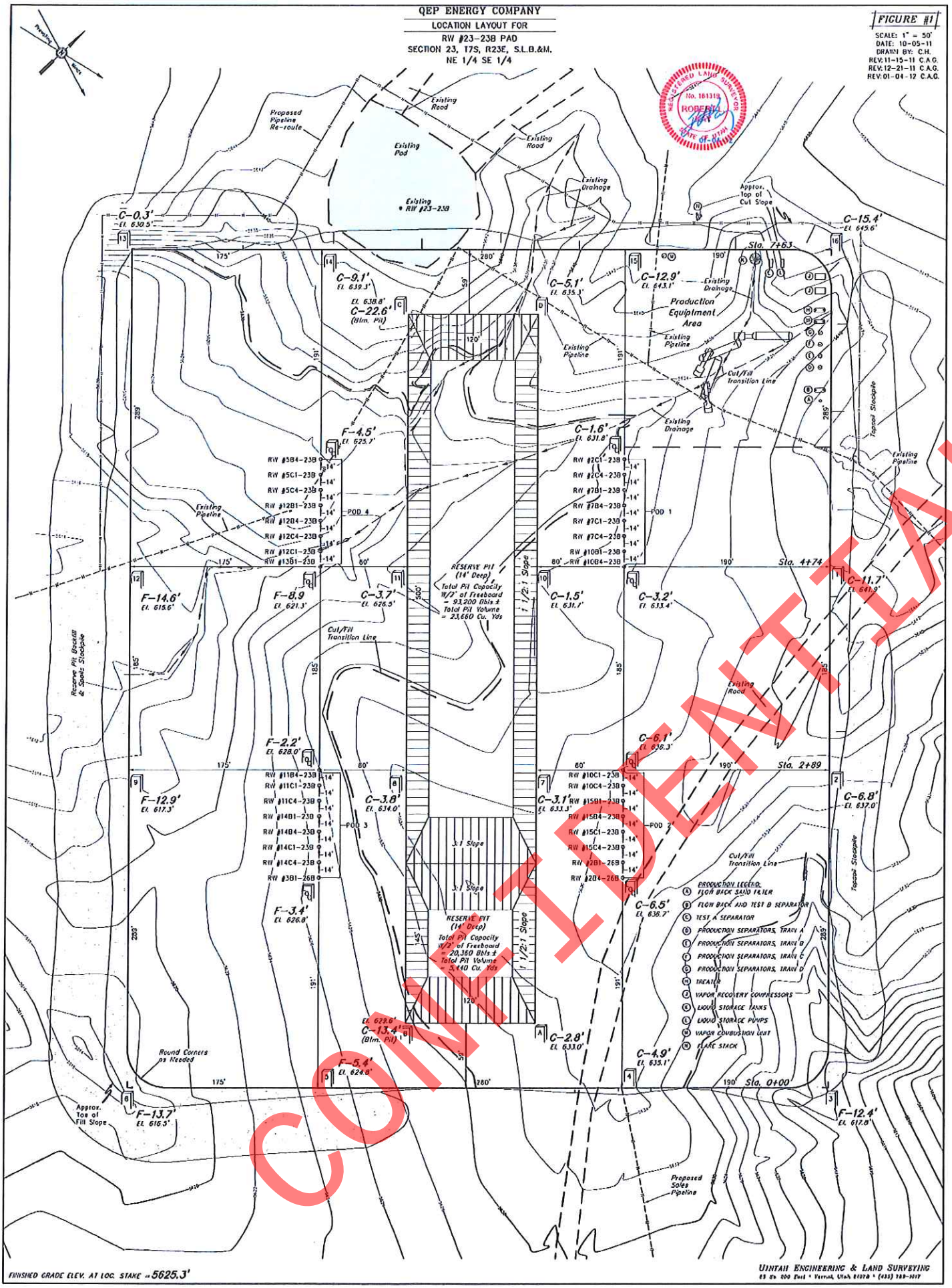
- Since 1964 -
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

LOCATION PHOTOS	10 MONTH	05 DAY	11 YEAR	PHOTO
TAKEN BY: A.F.	DRAWN BY: A.W.	REVISED: 00-00-00		

API Well Number: 43047523160000



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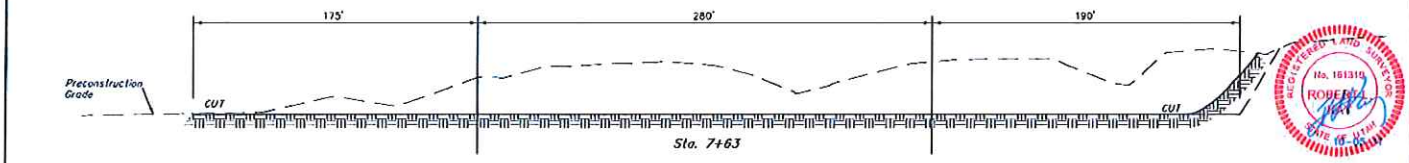
API Well Number: 43047523160000

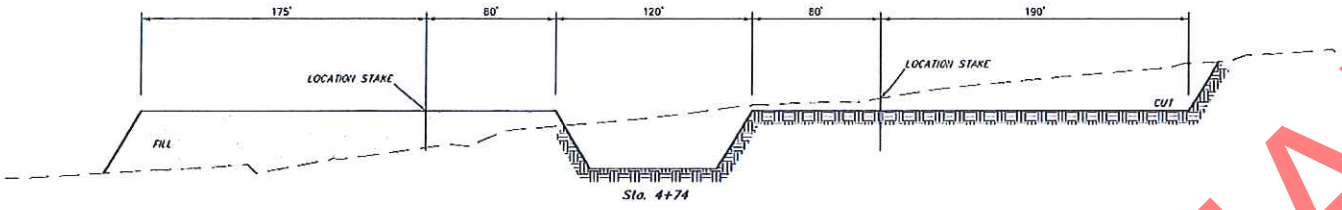
1" = 20' X-Section Scale
1" = 50'
DATE: 10-05-11
DRAWN BY: C.H.

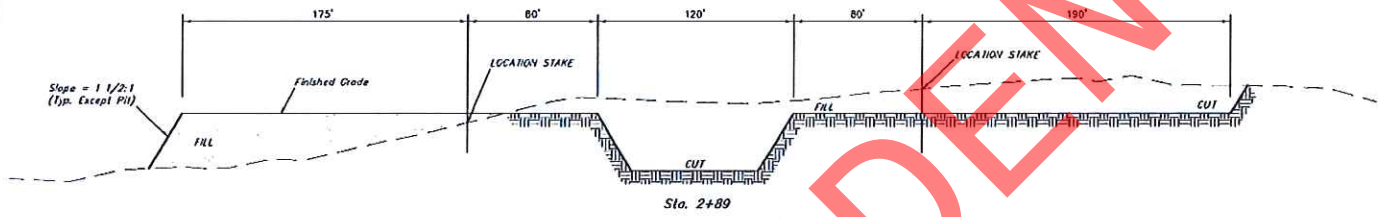
QEP ENERGY COMPANY

TYPICAL CROSS SECTIONS FOR
RW #23-23B PAD
SECTION 23, T7S, R23E, S.L.B.&M.
NE 1/4 SE 1/4

FIGURE #2







* NOTE:
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping	=	10,060 Cu. Yds.
Remaining Location	=	76,350 Cu. Yds.
TOTAL CUT	=	86,410 CU.YDS.
FILL	=	56,900 CU.YDS.

EXCESS MATERIAL	=	29,510 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol)	=	24,630 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	=	4,880 Cu. Yds.

APPROXIMATE ACREAGES
WELL SITE DISTURBANCE = ±14.198 ACRES
TOTAL = ±14.198 ACRES

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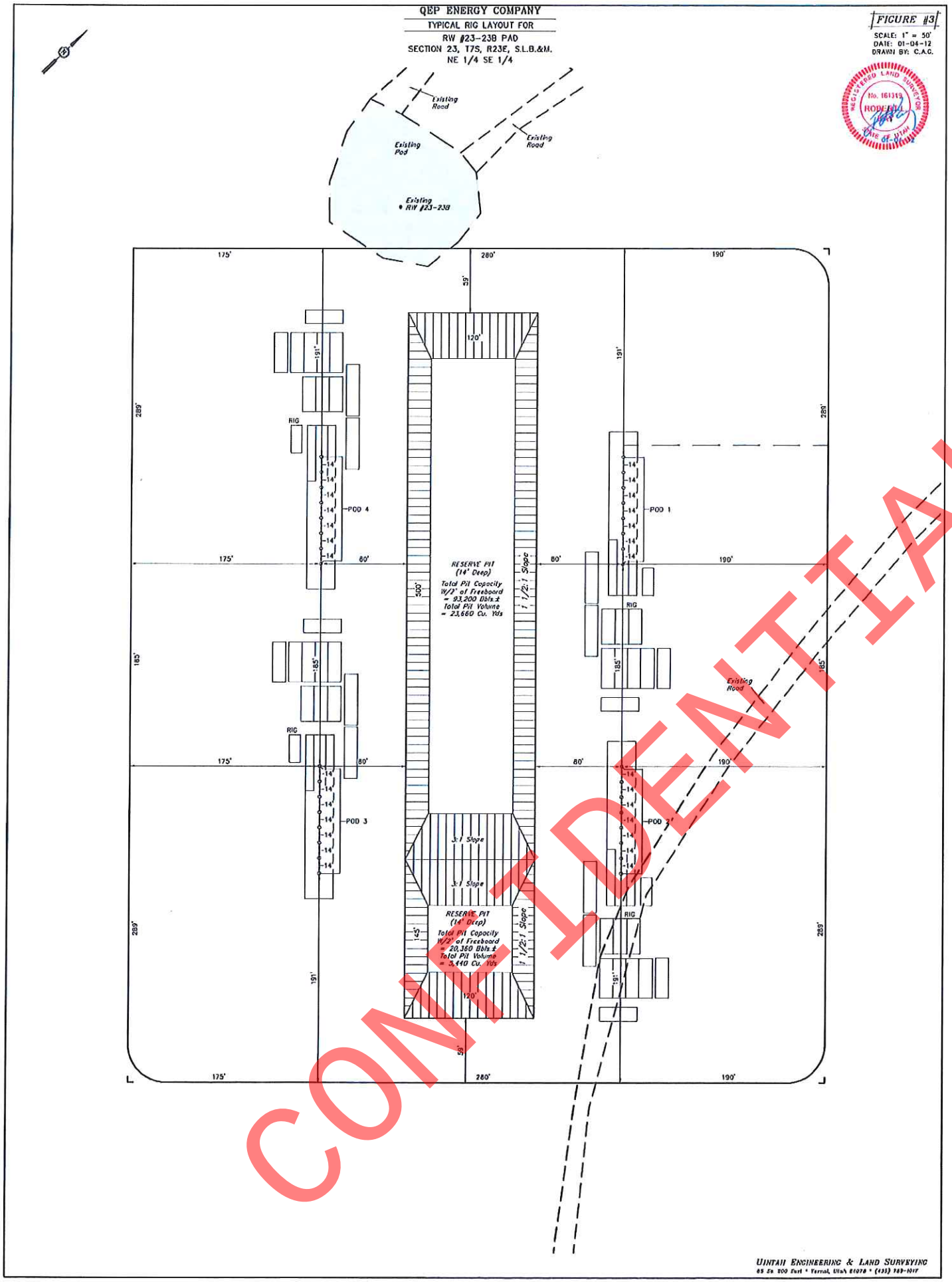

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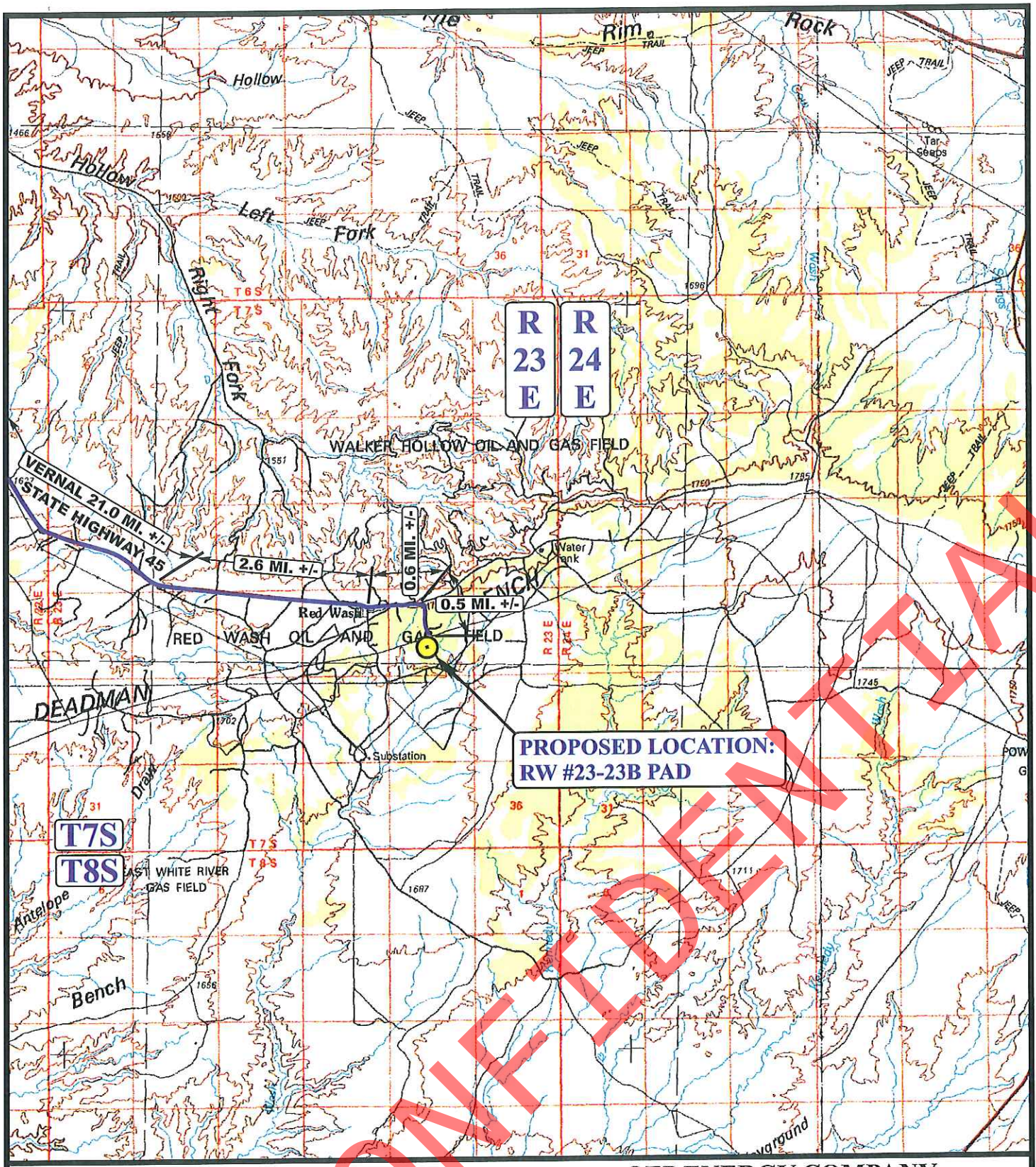
QEP ENERGY COMPANY
RW #23-23B PAD
SECTION 23, T7S, R23E, S.L.B.&M.

PROCEED IN AN EASTERLY, THEN SOUTHERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 3.9 MILES TO THE JUNCTION OF THIS ROAD AND STATE HIGHWAY 45 TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.1 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 2.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 0.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY, THEN SOUTHERLY DIRECTION APPROXIAMTELY 0.5 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED LOCATION IS APPROXIMATELY 24.7 MILES.

CONFIDENTIAL

API Well Number: 43047523160000



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LEGEND:

PROPOSED LOCATION

N

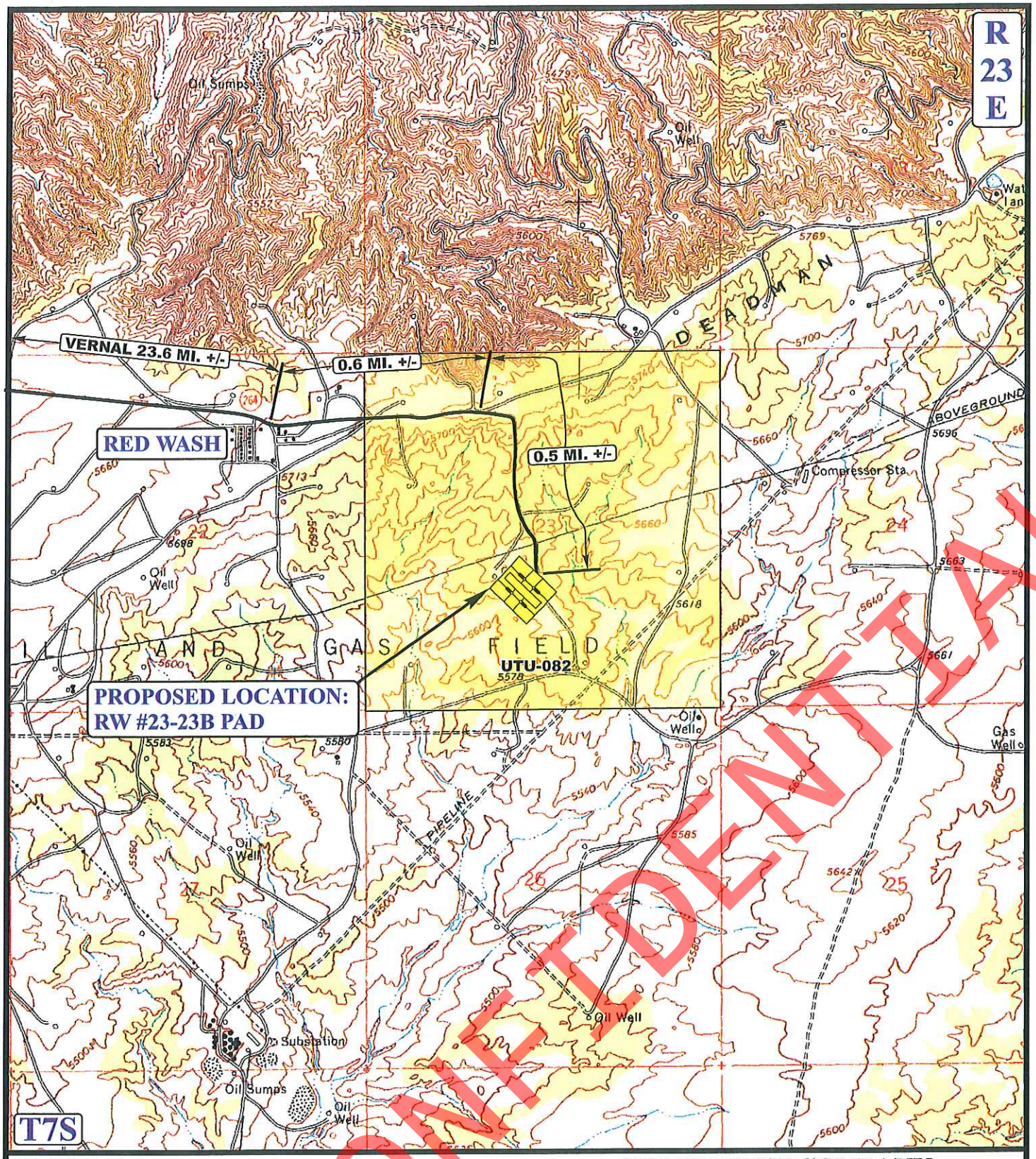
QEP ENERGY COMPANY

RW #23-23B PAD
SECTION 23, T7S, R23E, S.L.B.&M.
NE 1/4 SW 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

ACCESS ROAD MAP	10 MONTH	05 DAY	11 YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: A.W.	REVISED: 00-00-00		

API Well Number: 43047523160000



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LEGEND:

EXISTING ROAD

N

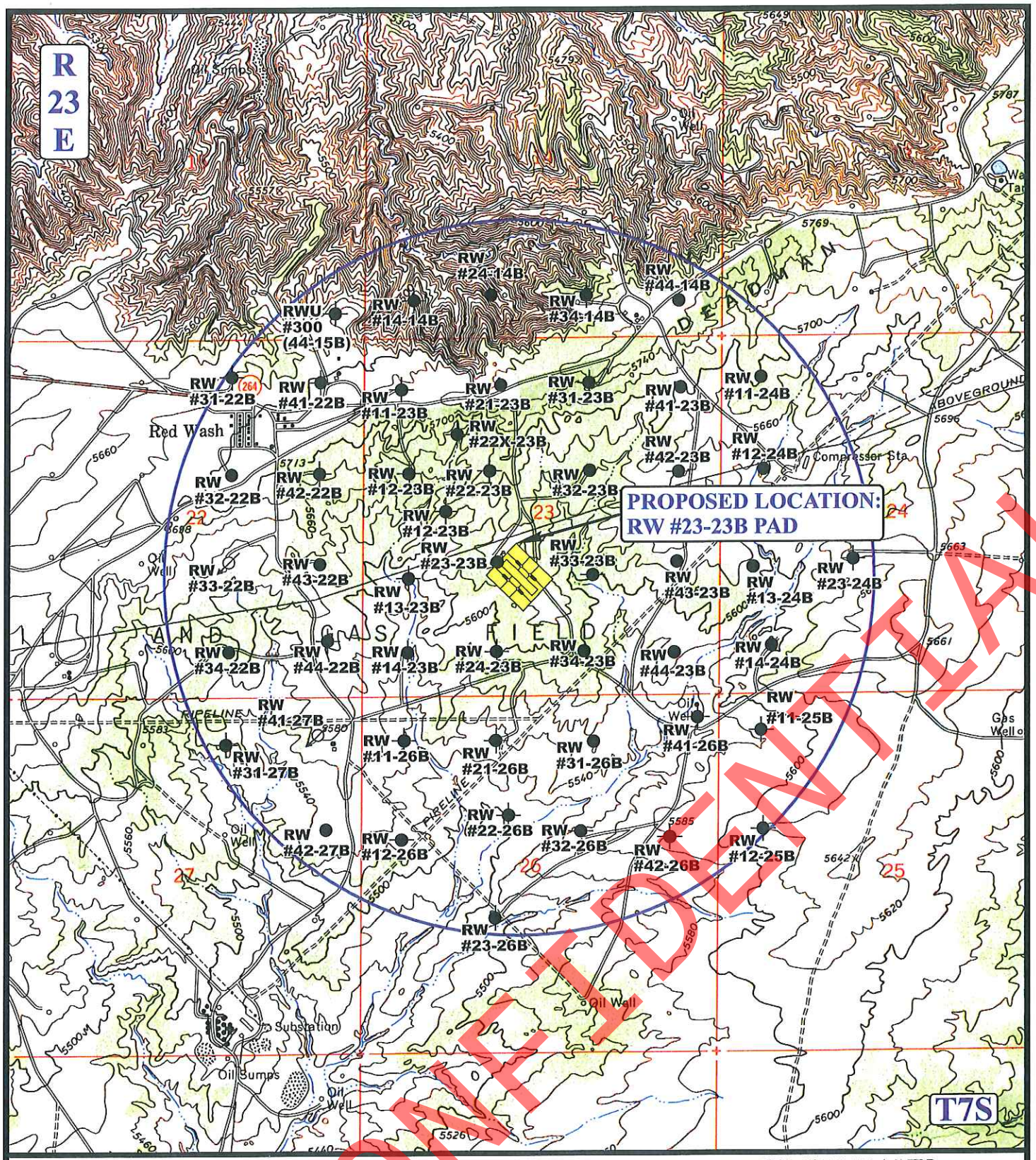
QEP ENERGY COMPANY

RW #23-23B PAD
SECTION 23, T7S, R23E, S.L.B.&M.
NE 1/4 SW 1/4

UELS
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

ACCESS ROAD MAP	10 MONTH	05 DAY	11 YEAR	B TOPO
SCALE: 1" = 2000'	DRAWN BY: A.W.	REVISED: 00-00-00		

API Well Number: 43047523160000



LEGEND:

- DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

N

QEP ENERGY COMPANY

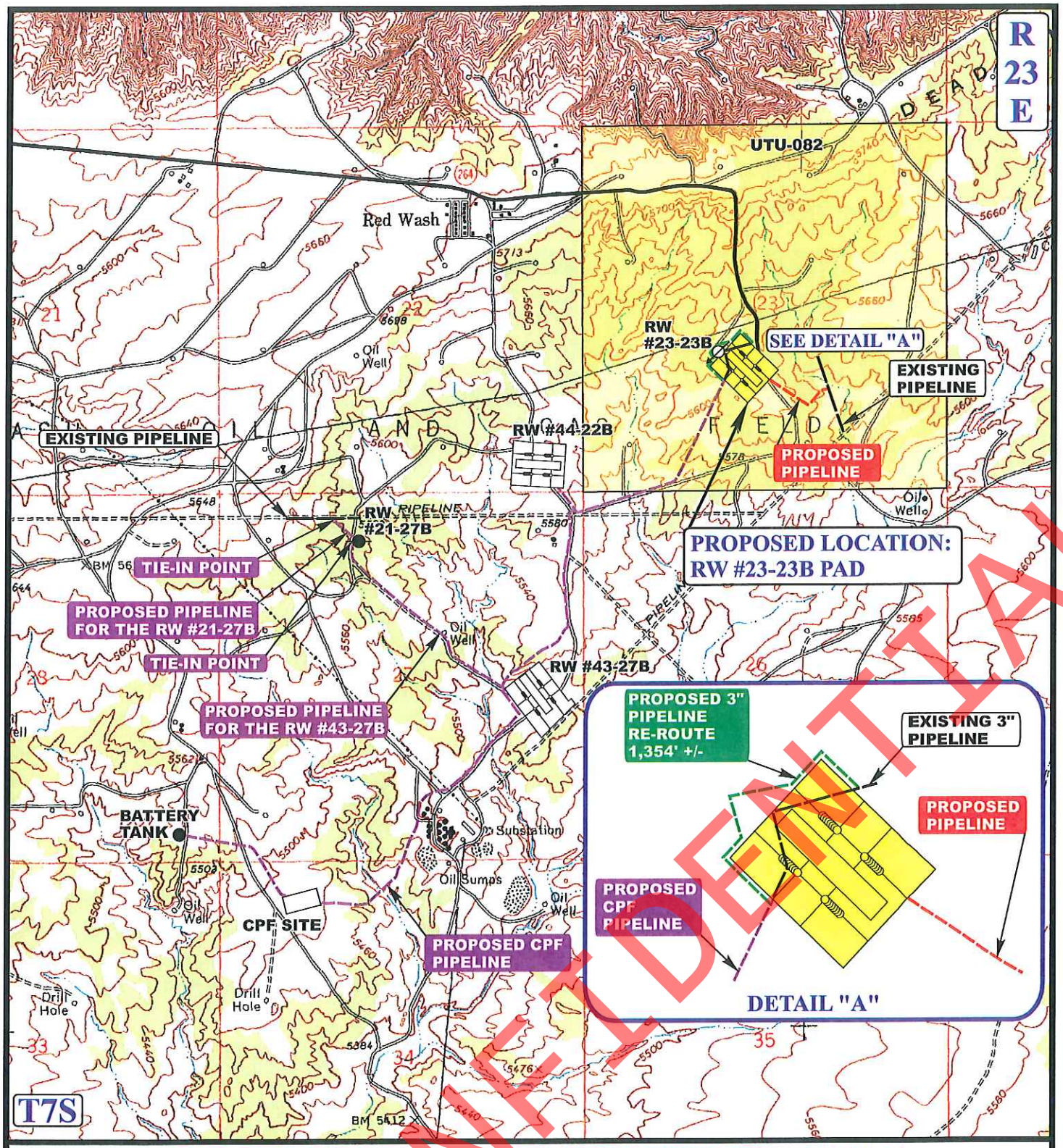
RW #23-23B PAD
SECTION 23, T7S, R23E, S.L.B.&M.
NE 1/4 SW 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	10 MONTH	05 DAY	11 YEAR	C TOPO
SCALE: 1" = 2000'	DRAWN BY: A.W.	REVISED: 00-00-00		

CONFIDENTIAL

API Well Number: 43047523160000



APPROXIMATE TOTAL PIPELINE DISTANCE = 1059' +/-

LEGEND:

- EXISTING ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE RE-ROUTE
- PROPOSED PIPELINE (SERVICING OTHER WELLS)
- PROPOSED PIPELINE

N

QEP ENERGY COMPANY

RW #23-23B PAD
SECTION 23, T7S, R23E, S.L.B.&M.
NE 1/4 SW 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	10 MONTH	05 DAY	11 YEAR	D TOPO
SCALE: 1" = 2000'	DRAWN BY: A.W.	REVISED: 10-12-11		

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QEP ENERGY (UT)

Red Wash
23-23B PAD
RW 15C1-23B

Original Hole

Plan: Plan ver.1 - Permit

Standard Planning Report

10 January, 2012

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QEP Energy Company

RECEIVED: January 30, 2012

QEP Energy Company

QEP Resources, Inc.

Planning Report

QEP Energy Company

Database:	EDMDB_QEP	**Local Co-ordinate Reference:**	Well RW 15C1-23B
Company:	QEP ENERGY (UT)	**TVD Reference:**	RKB @ 5641.30usft (EST. RKB)
Project:	Red Wash	**MD Reference:**	RKB @ 5641.30usft (EST. RKB)
Site:	23-23B PAD	**North Reference:**	True
Well:	RW 15C1-23B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan ver.1 - Permit		

Project Red Wash

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Utah Central Zone		Using geodetic scale factor

Site 23-23B PAD

Site Position:		**Northing:**	7,246,686.310 usft	**Latitude:**	40.193199
From:	Map	**Easting:**	2,256,158.369 usft	**Longitude:**	-109.295575
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	1.41 °

Well RW 15C1-23B

Well Position	**+N/-S**	-234.27 usft	**Northing:**	7,246,458.167 usft	**Latitude:**	40.192556
	+E/-W	244.92 usft	**Easting:**	2,256,408.965 usft	**Longitude:**	-109.294698
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	5,625.30 usft	**Ground Level:**	5,625.30 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/7/2011	10.95	66.05	52,409

Design Plan ver.1 - Permit

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	160.43

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,281.04	15.62	160.43	1,271.40	-99.70	35.44	2.00	2.00	0.00	160.43	
5,330.68	15.62	160.43	5,171.47	-1,127.17	400.64	0.00	0.00	0.00	0.00	
6,372.07	0.00	0.00	6,200.00	-1,260.10	447.88	1.50	-1.50	0.00	180.00	
11,044.07	0.00	0.00	10,872.00	-1,260.10	447.88	0.00	0.00	0.00	0.00	

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QEP Energy Company

QEP Resources, Inc.

Planning Report

QEP Energy Company

Database:	EDMDB_QEP	**Local Co-ordinate Reference:**	Well RW 15C1-23B
Company:	QEP ENERGY (UT)	**TVD Reference:**	RKB @ 5641.30usft (EST. RKB)
Project:	Red Wash	**MD Reference:**	RKB @ 5641.30usft (EST. RKB)
Site:	23-23B PAD	**North Reference:**	True
Well:	RW 15C1-23B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan ver.1 - Permit		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,281.04	15.62	160.43	1,271.40	-99.70	35.44	105.81	2.00	2.00	0.00
5,330.68	15.62	160.43	5,171.47	-1,127.17	400.64	1,196.25	0.00	0.00	0.00
6,372.07	0.00	0.00	6,200.00	-1,260.10	447.88	1,337.33	1.50	-1.50	0.00
11,044.07	0.00	0.00	10,872.00	-1,260.10	447.88	1,337.33	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RW 15C1-23B Target	0.00	0.00	8,240.00	-1,260.10	447.88	7,245,209.590	2,256,887.740	40.189097	-109.293095
- plan misses target center by 2040.00usft at 6372.07usft MD (6200.00 TVD, -1260.10 N, 447.88 E)									
- Circle (radius 150.00)									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
3,692.71	3,594.00	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,856.84	2,789.00	Green River		0.00	
3,640.80	3,544.00	Mahogany		0.00	
5,684.36	5,516.00	Est. Moderately Saline Water Base		0.00	
6,239.04	6,067.00	Wasatch		0.00	
8,415.07	8,243.00	Mesaverde		0.00	
10,744.07	10,572.00	Sego		0.00	

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RECEIVED: January 30, 2012

API Well Number: 43047523160000

QEP Energy Company

Company Name: QEP ENERGY (UT)

Azimuths to True North
Magnetic North: 10.95°
Magnetic Field
Strength: 52408.6snT
Dip Angle: 66.05°
Date: 12/7/2011
Model: IGRF2010

Project: Red Wash
Site: 23-23B PAD
Well: RW 15C1-23B
Wellbore: Original Hole
Design: Plan ver.1 - Permit

WELL DETAILS: RW 15C1-23B

Ground Level: 5625.30

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	7246458.167	2256408.965	40.192556	-109.294698	

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well RW 15C1-23B, True North
Vertical (TVD) Reference: RKB @ 5641.30usft (EST. RKB)
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: RKB @ 5641.30usft (EST. RKB)
Calculation Method: Minimum Curvature

PROJECT DETAILS: Red Wash

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Utah Central Zone

System Datum: Mean Sea Level

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
RW 15C1-23B Target	8240.00	-1260.10	447.88	7245209.590	2256887.740	Circle (Radius: 150.00)

SECTION DETAILS

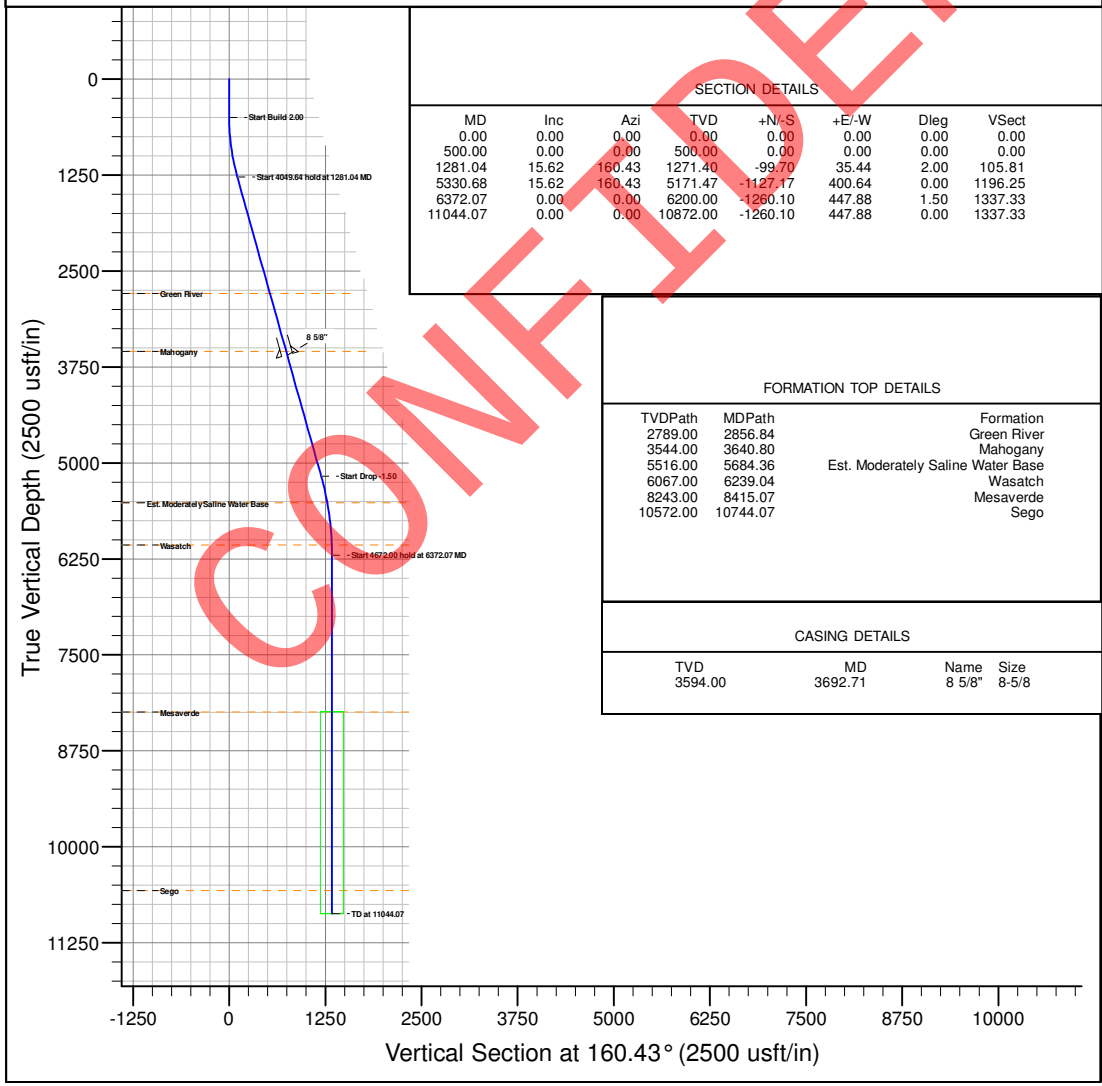
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00
1281.04	15.62	160.43	1271.40	-99.70	35.44	2.00	105.81
5330.68	15.62	160.43	5171.47	-1127.17	400.64	0.00	1196.25
6372.07	0.00	0.00	6200.00	-1260.10	447.88	1.50	1337.33
11044.07	0.00	0.00	10872.00	-1260.10	447.88	0.00	1337.33

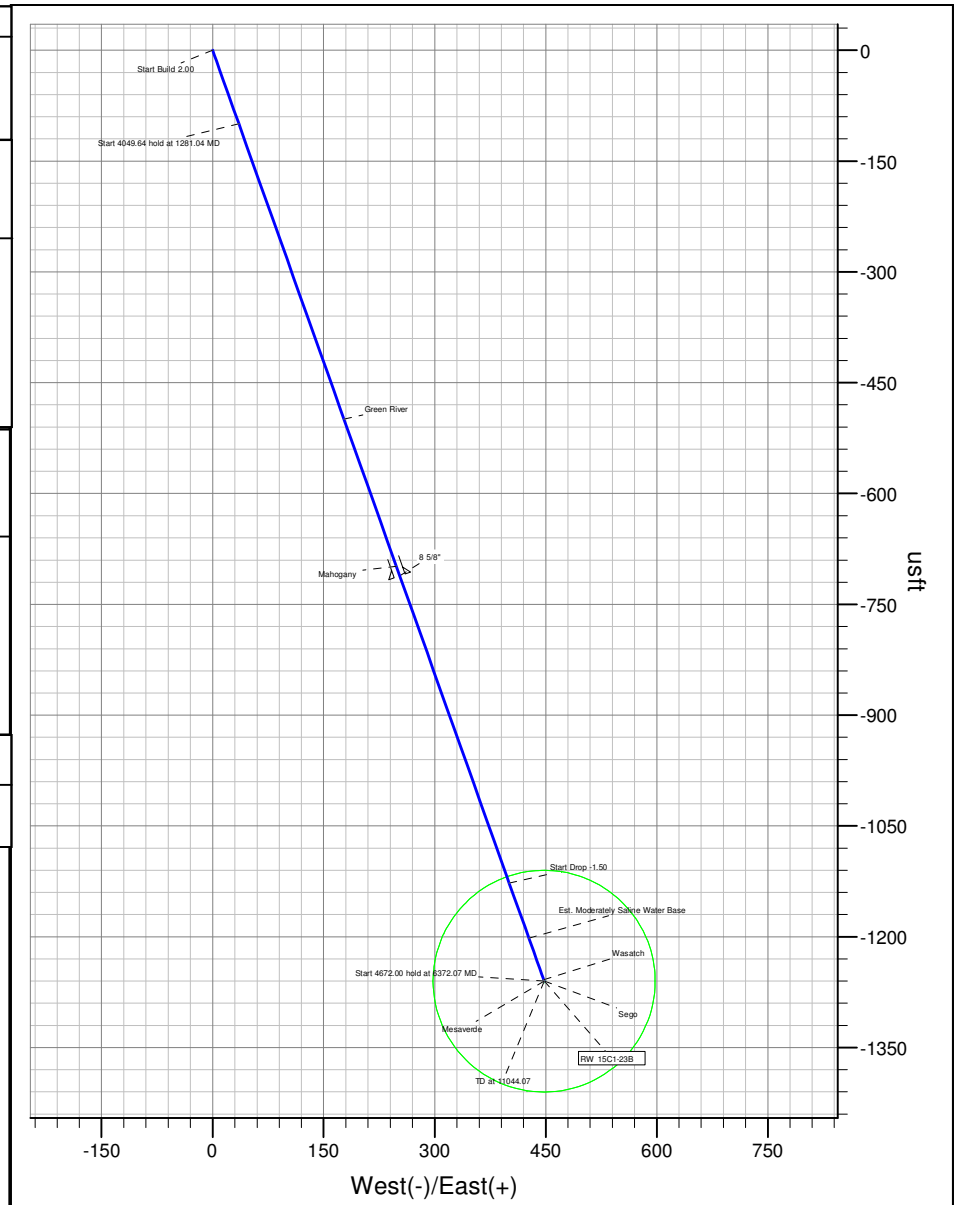
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2789.00	2856.84	Green River
3544.00	3640.80	Mahogany
5516.00	5684.36	Est. Moderately Saline Water Base
6067.00	6239.04	Wasatch
8243.00	8415.07	Mesaverde
10572.00	10744.07	Sego

CASING DETAILS

TVD	MD	Name	Size
3594.00	3692.71	8 5/8"	8-5/8





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QEP ENERGY COMPANY
RED WASH 23-23B PAD EXPANSION

ONSHORE ORDER NO. 1
MULTI – POINT SURFACE USE & OPERATIONS PLAN

RW 7C1-23B

Surface:	1932' FSL, 2330' FWL	SEC.23	NESW, T7S, R23E
BHL:	2167' FNL, 2294' FEL	SEC.23	SWNE, T7S, R23E

RW 2C1-23B

Surface:	1971' FSL, 2289' FWL	SEC.23	NESW, T7S, R23E
BHL:	850' FNL, 2290' FEL	SEC.23	NWNE, T7S, R23E

RW 2C4-23B

Surface:	1961' FSL, 2299' FWL	SEC.23	NESW, T7S, R23E
BHL:	1176' FNL, 2290' FEL	SEC.23	NWNE, T7S, R23E

RW 7B1-23B

Surface:	1951' FSL, 2309' FWL	SEC.23	NESW, T7S, R23E
BHL:	1506' FNL, 2291' FEL	SEC.23	SWNE, T7S, R23E

RW 7B4-23B

Surface:	1942' FSL, 2319' FWL	SEC.23	NESW, T7S, R23E
BHL:	1836' FNL, 2292' FEL	SEC.23	SWNE, T7S, R23E

RW 7C4-23B

Surface:	1922' FSL, 2340' FWL	SEC.23	NESW, T7S, R23E
BHL:	2495' FNL, 2293' FEL	SEC.23	SENE, T7S, R23E

RW 10B1-23B

Surface:	1913' FSL, 2350' FWL	SEC.23	NESW, T7S, R23E
BHL:	2454' FSL, 2292' FEL	SEC.23	NWSE, T7S, R23E

RW 10B4-23B

Surface:	1903' FSL, 2360' FWL	SEC.23	NESW, T7S, R23E
BHL:	2123' FSL, 2291' FEL	SEC.23	NWSE, T7S, R23E

RW 10C1-23B

Surface:	1775' FSL, 2494' FWL	SEC.23	NESW, T7S, R23E
BHL:	1793' FSL, 2293' FEL	SEC.23	NWSE, T7S, R23E

RW 10C4-23B

Surface:	1765' FSL, 2504' FWL	SEC.23	NESW, T7S, R23E
BHL:	1461' FSL, 2292' FEL	SEC.23	NWSE, T7S, R23E

RW 15B1-23B

Surface:	1756' FSL, 2514' FWL	SEC.23	NESW, T7S, R23E
BHL:	1133' FSL, 2290' FEL	SEC.23	SWSE, T7S, R23E

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RW 15B4-23B

Surface:	1746' FSL, 2524' FWL	SEC.23	NESW, T7S, R23E
BHL:	804' FSL, 2295' FEL	SEC.23	SWSE, T7S, R23E

RW 15C1-23B

Surface:	1736' FSL, 2534' FWL	SEC.23	NESW, T7S, R23E
BHL:	476' FSL, 2295' FEL	SEC.23	SWSE, T7S, R23E

RW 15C4-23B

Surface:	1727' FSL, 2544' FWL	SEC. 23	NESW, T7S, R23E
BHL:	144' FSL, 2292' FEL	SEC.23	SWSE, T7S, R23E

RW 2B1-26B

Surface:	1717' FSL, 2554' FWL	SEC.23	NESW, T7S, R23E
BHL:	186' FNL, 2292' FEL	SEC.26	NWNE, T7S, R23E

RW 2B4-26B

Surface:	1707' FSL, 2564' FWL	SEC.23	NESW, T7S, R23E
BHL:	516' FNL' 2292' FEL	SEC.26	NWNE, T7S, R23E

RW 5B4-23B

Surface:	1768' FSL, 2096' FWL	SEC.23	NESW, T7S, R23E
BHL:	1829' FNL, 342' FWL	SEC.23	SWNW, T7S, R23E

RW 5C1-23B

Surface:	1759' FSL, 2106' FWL	SEC.23	NESW, T7S, R23E
BHL:	2153' FNL, 343' FWL	SEC.23	SWNW, T7S, R23E

RW 5C4-23B

Surface:	1749' FSL, 2116' FWL	SEC.23	NESW, T7S, R23E
BHL:	2483' FNL, 341' FWL	SEC.23	SWNW, T7S, R23E

RW 12B1-23B

Surface:	1739' FSL, 2126' FWL	SEC.23	NESW, T7S, R23E
BHL:	2469' FSL, 342' FWL	SEC.23	NWSW, T7S, R23E

RW 12B4-23B

Surface:	1730' FSL, 2136' FWL	SEC.23	NESW, T7S, R23E
BHL:	2132' FSL, 340' FWL	SEC.23	NWSW, T7S, R23E

RW 12C4-23B

Surface:	1720' FSL, 2146' FWL	SEC.23	NESW, T7S, R23E
BHL:	1472' FSL, 342' FWL	SEC.23	NWSW, T7S, R23E

RW 12C1-23B

Surface:	1710' FSL, 2156' FWL	SEC.23	NESW, T7S, R23E
BHL:	1800' FSL, 343' FWL	SEC.23	NWSW, T7S, R23E

RW 13B1-23B

Surface:	1701' FSL, 2166' FWL	SEC.23	NESW, T7S, R23E
BHL:	1150' FSL, 342' FWL	SEC.23	SWSW, T7S, R23E

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RW 11B4-23B

Surface:	1573' FSL, 2300' FWL	SEC.23	NESW, T7S, R23E
BHL:	2127' FSL, 1664' FWL	SEC.23	NESW, T7S, R23E

RW 11C1-23B

Surface:	1563' FSL, 2310' FWL	SEC.23	NESW, T7S, R23E
BHL:	1796' FSL, 1663' FWL	SEC.23	NESW, T7S, R23E

RW 11C4-23B

Surface:	1553' FSL, 2320' FWL	SEC.23	NESW, T7S, R23E
BHL:	1464' FSL, 1663' FWL	SEC.23	NESW, T7S, R23E

RW 14B1-23B

Surface:	1544' FSL, 2330' FWL	SEC.23	NESW, T7S, R23E
BHL:	1142' FSL, 1662' FWL	SEC.23	SESW, T7S, R23E

RW 14B4-23B

Surface:	1534' FSL, 2341' FWL	SEC.23	NESW, T7S, R23E
BHL:	806' FSL, 1660' FWL	SEC.23	SESW, T7S, R23E

RW 14C1-23B

Surface:	1524' FSL, 2351' FWL	SEC.23	NESW, T7S, R23E
BHL:	480' FSL, 1661' FWL	SEC.23	SESW, T7S, R23E

RW 14C4-23B

Surface:	1515' FSL, 2361' FWL	SEC.23	NESW, T7S, R23E
BHL:	149' FSL, 1662' FWL	SEC.23	SESW, T7S, R23E

RW 3B1-26B

Surface:	1505' FSL, 2371' FWL	SEC.23	NESW, T7S, R23E
BHL:	182' FNL, 1661' FWL	SEC.26	NENW, T7S, R23E

This surface use and operations plan provides site specific information for the above referenced wells.

An onsite inspection was conducted for the RW 23-23B Pad Expansion on October 11, 2011. Weather conditions were sunny at the time of the onsite. In attendance at the inspection were the following individuals:

Kevin Sadlier	Bureau of Land Management
Holly Villa	Bureau of Land Management
Jan Nelson	QEP Energy Company
Stephanie Tomkinson	QEP Energy Company
Ryan Angus	QEP Energy Company
Valyn Davis	QEP Energy Company
Bob Haygood	QEP Energy Company
Andy Floyd	Uintah Engineering & Land Surveying

The proposed project consists of a 32 well pad with 14.198 acres of total disturbance. This equates to approximately 0.43 acres of disturbance per well.

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RECEIVED: January 30, 2012

1. Existing Roads:

The proposed well site is approximately 25 miles South of Vernal, Utah.

Refer to Topo Maps A and B for location of access roads within a 2 – mile radius.

All existing roads will be maintained and kept in good repair during all phases of operation.

2. Planned Access Roads:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Refer to Topo Map B for the location of the proposed access road.

No new access road is proposed. The access to be used is the existing road that parallels pod #2. The road will be re-routed on the north east side of the pad and will remain on the pad. Graveling or capping the roadbed will be performed as necessary to provide a well constructed safe road. Should conditions warrant, rock, gravel or culverts will be installed as needed.

Refer to Topo Map B for the location of the proposed access road.

3. Location of Existing Wells Within a 1 – Mile Radius:

Please refer to Topo Map C.

4. Location of Existing & Proposed Facilities:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Please refer to Figure 1 for production facility layout and location.

The following guidelines will apply if the well is productive.

A containment dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks). These dikes will be constructed of compacted impervious subsoil; hold 110% of the capacity of the largest tank; and, be independent of the back cut. If a Spill Prevention, Control, and Countermeasure (SPCC) Plan is required by the Environmental Protection Agency, the containment dike may be expanded to meet SPCC requirements with approval by the BLM/VFO AO. The specific APD will address additional capacity if such is needed due to environmental concerns. The use of topsoil for the construction of dikes will not be allowed.

All loading lines will be placed inside the berm surrounding the tank batteries.

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RECEIVED: January 30, 2012

All permanent (on site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a color approved by the BLM.

It was determined on the onsite by the BLM VFO AO that the facilities will be painted Covert Green.

The existing 3" pipeline that crosses the proposed location will be re-routed to the north east side of the pad for safety. The proposed pipeline re-route is 1,354' in length, containing approximately .932 acres. Please refer to Topo Map D for the location of the existing pipeline and the re-route.

Refer to Topo Map D for the location of the proposed pipeline.

All existing equipment will be moved off location before any construction begins.

The proposed surface pipeline will be constructed utilizing existing disturbed areas to minimize surface disturbance. No construction activities will be allowed outside of the proposed pipeline.

Prior to construction, the Permittee will develop a plan of installation to minimize surface disturbance. Pipe will be strung along the pipeline route with either a flatbed trailer and rubber tired backhoe or a tracked typed side boom. Where surface conditions do not allow the pipe to be strung using conventional methods, the Permittee will utilize pull sections to run the fabricated pipe through the area from central staging areas along the pipeline route.

Upon completion of stringing activities the Permittee will fabricate the pipeline on wooden skids adjacent to the centerline of the pipeline route using truck mounted welding machines. All fabricated piping will be lowered off of the wooden skids and placed along the centerline. Upon completion of all activities, the wooden skids will be removed from the pipeline route using a flatbed truck or flatbed truck and trailer.

When the surface terrain prohibits the Permittee from safely installing the pipeline along the pipeline route, grading of the route will be required. Prior to installing the pipeline in these areas a plan will be developed to safely install the pipeline while minimizing grading activities and surface disturbances. Additionally, erosion control Best Management Practices will be installed as needed prior to the start of any grading activities. Surface grading will be limited to what is needed to safely install the pipeline. Track type bulldozers and track type backhoes will be utilized for grading activities.

Upon completion of the pipeline installation, the pipeline route will be restored to the pre-disturbance surface contours.

The proposed pipeline will be a surface 10" or smaller, 1,059' in length, containing .729 acres.

Road Crossings

Fusion Bond or concrete coated pipe will be used for all road crossings to alleviate future corrosion.

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All pipe and fittings used for road crossings will be prefabricated within the proposed pipeline route to minimize the duration of open pipe trench across the roadway. Pipe used for road crossings will be isolated on each end with a flange set and insulation kit and cathodically protected with a magnesium type anode. Adequately sized equipment will be used for minor and major road crossings. Depth of cover for minor roads will be >4' and the depth of cover for major roads will be >6'.

Prior to lowering the pipe in the trench, the Permittee will "Jeep" the pipe to locate and repair any Holidays in the pipe coating. Upon lowering the pipe in the trench, 6" of bedding and a minimum of 6" of shading will be installed to protect the pipe using either native soils <1" in diameter or imported sand. Pipe trenches that extend across gravel roads will be backfilled with native soils to within 8" of the driving surface and capped with 3/4" road base. Pipe trenches that extend across asphalt paved roads will be backfilled to 4" of the driving surface with 3/4" road base and capped asphalt material.

5. Location and Type of Water Supply:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Water for drilling purposes would be obtained from Wonsits Valley Water Right # A 36125 (which was filed on May 7, 1964) or Red Wash Water Right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System.

6. Source of Construction Materials:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

The use of materials under BLM jurisdiction will conform with 43 CFR 3610.2-3.

7. Methods of Handling Waste Materials:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids including salts and chemicals will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be used at the next drill site or will be removed and disposed of at an approved waste disposal facility within 6 months after drilling is terminated.

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Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

Unless specified in the site specific APD, the reserve pit will be constructed on the location and will not be located within natural drainages, where a flood hazard exists or surface runoff will or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

It will be determined at the on-site inspection if a pit liner is necessary, the reserve pit will be lined with a synthetic reinforced 30 mil liner with sufficient bedding to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place.

No trash or scrap will be disposed of in the pit.

Reserve pit leaks are considered an undesirable event and will be orally reported to the AO.

After first production, produced wastewater will be confined to the approved pit or storage tank for a period not to exceed 90 days.

After the 90 day period, the produced water will be contained in tanks on location and then hauled by truck to one of the following pre-approved disposal sites:

Red Wash Disposal well located in the SESE, Section 28, T7S, R23E,
West End Disposal located in the NESE, Section 28, T7S, R22E,
NBE 12 SWD-10-9-23 located in the NWSW, Section 10, 9S, 23E.

Produced water, oil, and other byproducts will not be applied to roads or well pads for the control of dust or weeds. The dumping of produced fluids on roads, well sites, or other areas will not be allowed.

Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site. The spills will be reported to the AO and other authorities as appropriate.

A chemical porta-toilet will be furnished with the drilling rig. The chemical porta-toilet wastes will be hauled to Ashley Valley Sewer and Water System for disposal.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. Trash will not be burned on location. All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig. All trash and waste material will be hauled to the Uintah County Landfill.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of wells. Furthermore, extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will not be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of wells within these areas. Specific APD's shall address any modifications from this policy.

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8. Ancillary Facilities:

None anticipated.

9. Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram rig orientation, parking areas, and access roads, as well as the location of the following:

The reserve pit.

The stockpiled topsoil will not be used for facility berms. All brush removed from the well pad during construction will be stockpiled with topsoil.

The flare pit or flare box will be located downwind from the prevailing wind direction.

Any drainage that crosses the well location will be diverted around the location by using ditches, water diversion drains or berms. If deemed necessary at the on-site, erosion drains may be installed to contain sediments that could be produced from access roads and well locations.

A pit liner is required. A felt pit liner will be required if bedrock is encountered.

10. Fencing Requirements:

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

All pits will be fenced according to the following minimum standards:

39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched using a stretching device before it is attached to corner posts.

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The reserve pit will be fenced on three (3) sides during drilling operations. The fourth side will be put in place when the rig moves off location. The pit will be fenced and maintained until it is backfilled. If drilling operations does not commence within 3 days, the fourth side of the fence will be installed

11. Plans for Reclamation of the Surface:

Please refer to QEP Energy Company Uinta Basin Division Reclamation Plan

Site Specific Procedures:

Site Specific Reclamation Summary:

Reclamation will follow QEP Energy Company, Uinta Basin Division's Reclamation Plan, September 2009 (QEP's Reclamation Plan) and the BLM Green River District Reclamation Guidelines.

After the pad is built, the topsoil piles will be seeded, signed, and erosion control devices and techniques will be implemented.

All trash and debris will be removed from the disturbed area.

After the wells are on production, the pad will be downsized to a smaller production pad.

The cuttings pit is located in the center of the production pad; it will be backfilled and capped with road base and gravel.

Interim reclamation will be conducted on the portion of the pad that is downsized.

The interim reclamation area will be recontoured to blend with the surrounding landscape. All topsoil will be evenly distributed.

Water courses and drainages will be established.

Erosion control devices and techniques will be installed where needed.

Seeding will be done in the fall, prior to ground freeze up.

The seed mix will be determined prior to seeding.

Monitoring and reporting will be conducted as stated in QEP's Reclamation Plan. A reference site and weed data sheet have been established and are included in this application.

Weed control will be conducted as stated in QEP's Reclamation Plan.

It was determined and agreed upon that there is 5" inches of top soil.

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12. Surface Ownership:

Bureau of Land Management
170 South 500 East
Vernal, Utah 84078
(435) 781-4400

13. Other Information:

A Class III archaeological survey was conducted by Montgomery Archaeology Consultants. A copy of this report was submitted on October 19, 2011, **State of Utah Antiquities Project U-11-MQ-0913b** by Montgomery Archaeology Consultants. Cultural resource clearance was recommended for this location.

A Class lll paleontological survey was conducted by Intermountain Paleo Consulting. A copy of this report was submitted on October 14, 2011 **IPC # 11-176** by Stephen D. Sandau. The inspection resulted in the location of no fossil resources. However, if vertebrate fossil(s) are found during construction a paleontologist should be immediately notified. QEP Energy Company will provide Paleo monitor if needed.

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RECEIVED: January 30, 2012

API Well Number: 43047523160000

QEP Energy Company

11002 East 17500 South
Vernal, UT 84078
Telephone 435-781-4331
Fax 435-781-4395

January 26, 2012

Ms. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

RE: Directional Drilling R649-3-11
Red Wash Unit
RW 15C1-23B
T7S-R23E
Section 23:
1736' FSL, 2534' FWL, NESW (Surface)
476' FSL, 2295' FEL, SWSE (Bottom Hole)
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of QEP Energy Company Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649 -3-11 pertaining to the location and drilling of a directional well.

QEP Energy Company is permitting this well at this location for geological reasons. Locating the well at the surface location and directionally drilling from this location, QEP Energy Company will be able to minimize surface disturbance.

Furthermore, QEP Energy Company certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information QEP Energy Company requests the permit be granted pursuant to Rule R649-3-11.

Sincerely,

QEP Energy Company

Jan Nelson

Jan Nelson
Permit Agent

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Lessee's or Operator's Representative & Certification:

Valyn Davis
Regulatory Affairs Analyst
QEP Energy Company
11002 East 17500 South
Vernal, UT 84078
(435) 781-4369

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

QEP Energy Company is considered to be the operator of the subject well. QEP Energy Company agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104.2 for lease activities is being provided by Bond No. ESB000024

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operations; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Valyn Davis
Valyn Davis

1/27/2012
Date

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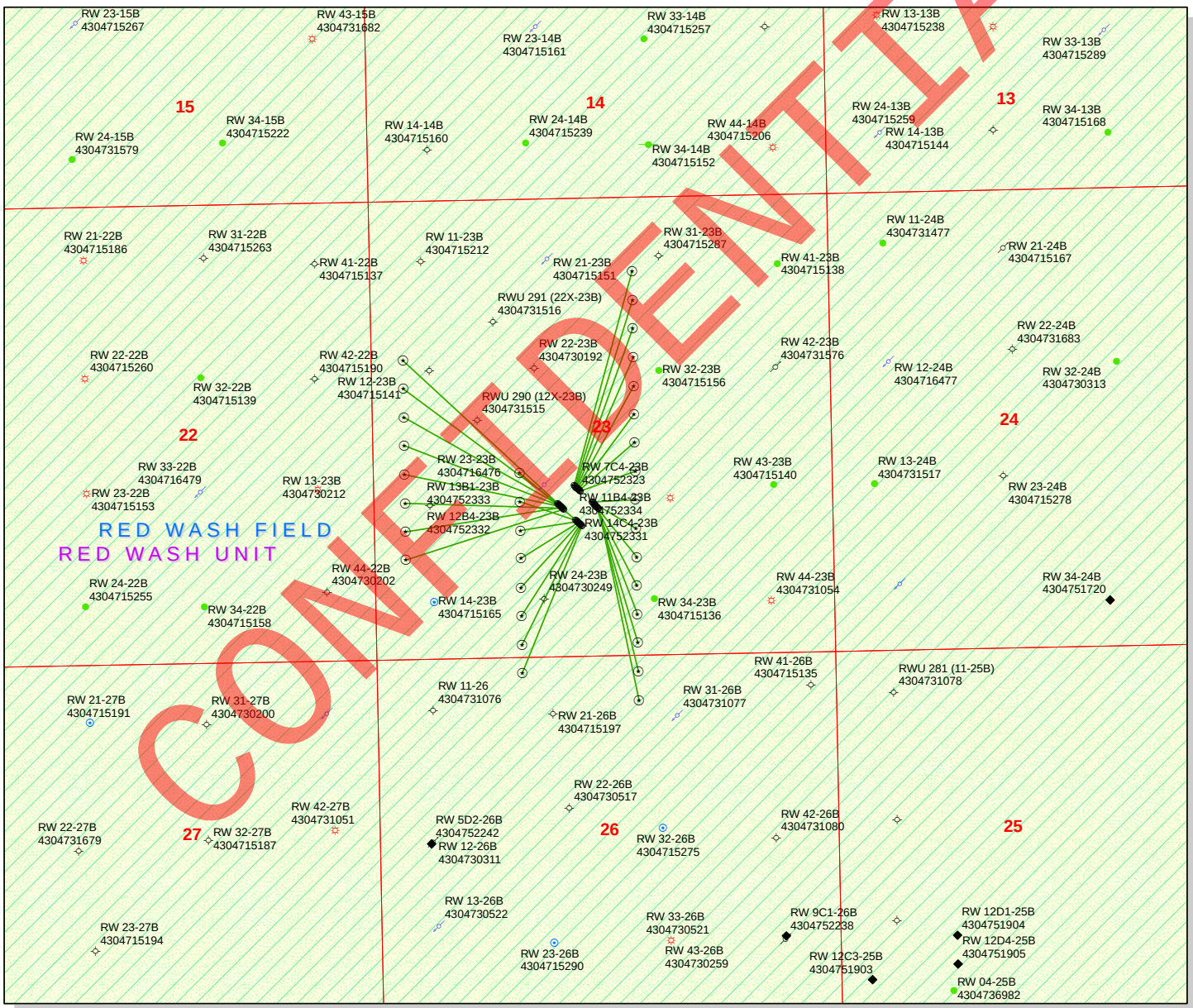
API Well Number: 43047523160000



API Number: 4304752316

Well Name: RW 15C1-23B

Township T0.7 . Range R2.3 . Section 23

Meridian: SLBM

Operator: QEP ENERGY COMPANY

Map Prepared:
Map Produced by Diana Mason

Units
STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields
STATUS
- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED

Wells Query
Status
- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LA - Location Abandoned
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- RET - Returned APD
- SGW - Shut-in Gas Well
- SOW - Shut-in Oil Well
- TA - Temp. Abandoned
- TW - Test Well
- WDW - Water Disposal
- WIW - Water Injection Well
- WSW - Water Supply Well

1,500 750 0 1,500 Feet

1:14,184

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RECEIVED: February 07, 2012

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

February 7, 2012

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 Plan of Development Red Wash Unit, Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2012 within the Red Wash Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ MESA VERDE)		
43-047-52303	RW 2C1-23B	Sec 23 T07S R23E 1971 FSL 2289 FWL
	BHL	Sec 23 T07S R23E 0850 FNL 2290 FEL
43-047-52304	RW 2C4-23B	Sec 23 T07S R23E 1961 FSL 2299 FWL
	BHL	Sec 23 T07S R23E 1176 FNL 2290 FEL
43-047-52305	RW 7B1-23B	Sec 23 T07S R23E 1951 FSL 2309 FWL
	BHL	Sec 23 T07S R23E 1506 FNL 2291 FEL
43-047-52306	RW 7B4-23B	Sec 23 T07S R23E 1942 FSL 2319 FWL
	BHL	Sec 23 T07S R23E 1836 FNL 2292 FEL
43-047-52307	RW 7C1-23B	Sec 23 T07S R23E 1932 FSL 2330 FWL
	BHL	Sec 23 T07S R23E 2167 FNL 2294 FEL
43-047-52308	RW 14C1-23B	Sec 23 T07S R23E 1524 FSL 2351 FWL
	BHL	Sec 23 T07S R23E 0480 FSL 1661 FWL
43-047-52309	RW 10B1-23B	Sec 23 T07S R23E 1913 FSL 2350 FWL
	BHL	Sec 23 T07S R23E 2454 FSL 2292 FEL
43-047-52310	RW 14B4-23B	Sec 23 T07S R23E 1534 FSL 2341 FWL
	BHL	Sec 23 T07S R23E 0806 FSL 1660 FWL
43-047-52311	RW 5B4-23B	Sec 23 T07S R23E 1768 FSL 2096 FWL
	BHL	Sec 23 T07S R23E 1829 FNL 0342 FWL

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RECEIVED: February 14, 2012

API #	WELL NAME	LOCATION

(Proposed PZ MESA VERDE)

43-047-52312	RW 5C1-23B	Sec 23 T07S R23E 1759 FSL 2106 FWL
		BHL Sec 23 T07S R23E 2153 FNL 0343 FWL
43-047-52313	RW 2B4-26B	Sec 23 T07S R23E 1707 FSL 2564 FWL
		BHL Sec 26 T07S R23E 0516 FNL 2292 FEL
43-047-52314	RW 15C4-23B	Sec 23 T07S R23E 1727 FSL 2544 FWL
		BHL Sec 23 T07S R23E 0144 FSL 2292 FEL
43-047-52315	RW 15B1-23B	Sec 23 T07S R23E 1756 FSL 2514 FWL
		BHL Sec 23 T07S R23E 1133 FSL 2290 FEL
43-047-52316	RW 15C1-23B	Sec 23 T07S R23E 1736 FSL 2534 FWL
		BHL Sec 23 T07S R23E 0476 FSL 2295 FEL
43-047-52317	RW 10C4-23B	Sec 23 T07S R23E 1765 FSL 2504 FWL
		BHL Sec 23 T07S R23E 1461 FSL 2292 FEL
43-047-52318	RW 14B1-23B	Sec 23 T07S R23E 1544 FSL 2330 FWL
		BHL Sec 23 T07S R23E 1142 FSL 1662 FWL
43-047-52319	RW 15B4-23B	Sec 23 T07S R23E 1746 FSL 2524 FWL
		BHL Sec 23 T07S R23E 0804 FSL 2295 FEL
43-047-52320	RW 10C1-23B	Sec 23 T07S R23E 1775 FSL 2494 FWL
		BHL Sec 23 T07S R23E 1793 FSL 2293 FEL
43-047-52321	RW 11C4-23B	Sec 23 T07S R23E 1553 FSL 2320 FWL
		BHL Sec 23 T07S R23E 1464 FSL 1663 FWL
43-047-52322	RW 10B4-23B	Sec 23 T07S R23E 1903 FSL 2360 FWL
		BHL Sec 23 T07S R23E 2123 FSL 2291 FEL
43-047-52323	RW 7C4-23B	Sec 23 T07S R23E 1922 FSL 2340 FWL
		BHL Sec 23 T07S R23E 2495 FNL 2293 FEL
43-047-52324	RW 2B1-26B	Sec 23 T07S R23E 1717 FSL 2554 FWL
		BHL Sec 26 T07S R23E 0186 FNL 2292 FEL
43-047-52325	RW 3B1-26B	Sec 23 T07S R23E 1505 FSL 2371 FWL
		BHL Sec 26 T07S R23E 0182 FNL 1661 FWL
43-047-52326	RW 11C1-23B	Sec 23 T07S R23E 1563 FSL 2310 FWL
		BHL Sec 23 T07S R23E 1796 FSL 1663 FWL
43-047-52327	RW 5C4-23B	Sec 23 T07S R23E 1749 FSL 2116 FWL
		BHL Sec 23 T07S R23E 2483 FNL 0341 FWL
43-047-52328	RW 12B1-23B	Sec 23 T07S R23E 1739 FSL 2126 FWL
		BHL Sec 23 T07S R23E 2469 FSL 0342 FWL
43-047-52329	RW 12C4-23B	Sec 23 T07S R23E 1720 FSL 2146 FWL
		BHL Sec 23 T07S R23E 1472 FSL 0342 FWL

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RECEIVED: February 14, 2012

API #	WELL NAME	LOCATION

(Proposed PZ MESA VERDE)

43-047-52330	RW 12C1-23B	Sec 23 T07S R23E 1710 FSL 2156 FWL
		BHL Sec 23 T07S R23E 1800 FSL 0343 FWL
43-047-52331	RW 14C4-23B	Sec 23 T07S R23E 1515 FSL 2361 FWL
		BHL Sec 23 T07S R23E 0149 FSL 1662 FWL
43-047-52332	RW 12B4-23B	Sec 23 T07S R23E 1730 FSL 2136 FWL
		BHL Sec 23 T07S R23E 2132 FSL 0340 FWL
43-047-52333	RW 13B1-23B	Sec 23 T07S R23E 1701 FSL 2166 FWL
		BHL Sec 23 T07S R23E 1150 FSL 0342 FWL
43-047-52334	RW 11B4-23B	Sec 23 T07S R23E 1573 FSL 2300 FWL
		BHL Sec 23 T07S R23E 2127 FSL 1664 FWL

This office has no objection to permitting the wells at this time.

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals, email=Michael_Coulthard@blm.gov, c=US
Date: 2012.02.07 07:25:50 -07'00'

bcc: File - Red Wash Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:2-7-12

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RECEIVED: February 14, 2012

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 1/30/2012
API NO. ASSIGNED: 43047523160000
WELL NAME: RW 15C1-23B
OPERATOR: QEP ENERGY COMPANY (N3700)
PHONE NUMBER: 435 781-4369
CONTACT: Valyn Davis

PROPOSED LOCATION: NESW 23 070S 230E
Permit Tech Review: ✔

SURFACE: 1736 FSL 2534 FWL
Engineering Review: ☐

BOTTOM: 0476 FSL 2295 FEL
Geology Review: ✔

COUNTY: UINTAH
LATITUDE: 40.19255
LONGITUDE: -109.29461
UTM SURF EASTINGS: 645165.00
NORTHINGS: 4450523.00
FIELD NAME: RED WASH
LEASE TYPE: 1 - Federal
LEASE NUMBER: UTU082
PROPOSED PRODUCING FORMATION(S): MESA VERDE
SURFACE OWNER: 1 - Federal
COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

- ✔ **PLAT**
- ✔ **Bond:** FEDERAL - ESB000024
- ☐ **Potash**
- ☐ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ✔ **Water Permit:** A-36125/ 49-2153
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☐ **Intent to Commingle**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit: RED WASH

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ✔ **Drilling Unit**

Board Cause No: Cause 187-07
Effective Date: 9/18/2001
Siting: Suspends General Siting

- ✔ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations: 4 - Federal Approval - dmason
15 - Directional - dmason

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RECEIVED: February 14, 2012

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill

****

Well Name: RW 15C1-23B
API Well Number: 43047523160000
Lease Number: UTU082
Surface Owner: FEDERAL
Approval Date: 2/14/2012

Issued to:
QEP ENERGY COMPANY, 11002 East 17500 South, Vernal, Ut 84078

Authority:
Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 187-07. The expected producing formation or pool is the MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

General:
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:
State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

Notification Requirements:
The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well contact Carol Daniels at 801-538-5284
  (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas

API Well No: 43047523160000

website
at http://oilgas.ogm.utah.gov

Reporting Requirements:
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers
Associate Director, Oil & Gas

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: RED WASH

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: RW 15C1-23B

2. NAME OF OPERATOR: QEP ENERGY COMPANY

9. API NUMBER: 43047523160000

3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, Ut, 84078

PHONE NUMBER: 303 308-3068 Ext

9. FIELD and POOL or WILDCAT: RED WASH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1736 FSL 2534 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 23 Township: 07.0S Range: 23.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ SPUD REPORT Date of Spud: 9/1/2012	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

ON 9/1/2012 - SET 40' OF 16" CONDUCTOR PIPE. CEMENTED WITH READY MIX.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
September 05, 2012

NAME (PLEASE PRINT) Valyn Davis

PHONE NUMBER 435 781-4369

TITLE Regulatory Affairs Analyst

SIGNATURE N/A

DATE 9/4/2012

RECEIVED: Sep. 04, 2012

Form 3160-3
(August 2007)

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FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN 26 2012

BLM VERNAL, UTAH

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
UTU082

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
892000761X

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
RW 15C1-23B

2. Name of Operator QEP ENERGY COMPANY

9. API Well No.
43 047 52316

3a. Address 11002 SOUTH 17500 EAST
VERNAL, UT 84078

3b. Phone No. *(include area code)*
(435) 781-4369

10. Field and Pool, or Exploratory
RED WASH

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NESW, 1736' FSL, 2534' FWL, 40.192566 N LAT., 109.294697 W LON.
At proposed prod. zone SWSE, 476' FSL, 2295' FEL, 40.189097 N LAT., 109.293094 W LON.

11. Sec., T. R. M. or Blk. and Survey or Area
SEC. 23, T7S, R23E, MER SLB

14. Distance in miles and direction from nearest town or post office*
25 MILES +/- SOUTH EAST OF VERNAL, UTAH

12. County or Parish
UINTAH

13. State
UT

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any) 476'

16. No. of acres in lease
1280

17. Spacing Unit dedicated to this well
10

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 10,090' FROM UNIT BOUNDARY LINE

19. Proposed Depth
11,044' MD
10,872' TVD

20. BLM/BIA Bond No. on file
ESB000024

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
5625 GL

22. Approximate date work will start*
06/01/2012

23. Estimated duration
30 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature Valyn Davis
Name *(Printed/Typed)* VALYN DAVIS
Date 01/26/2012

Title
REGULATORY AFFAIRS ANALYST

Approved by *(Signature)*
Name *(Printed/Typed)* Jerry Kenczka
Date AUG 01 2012

Title Assistant Field Manager
Lands & Mineral Resources
Office VERNAL FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

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UDOGM

NOTICE OF APPROVAL
CONDITIONS OF APPROVAL ATTACHED

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NOS- 1/11/12

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	QEP ENERGY COMPANY	Location:	NESW, Sec.23,T7S R23E
Well No:	RW 15C1-23B	Lease No:	UTU-082
API No:	43-047-52316	Agreement:	Red Wash

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

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A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: blm_ut_vn_opreport@blm.gov
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

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SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.

- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.

- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.

- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

Site Specific COA's

- When feasible, two or more rigs (including drilling and completion rigs) will not be run simultaneously within 200 meters of each other. If two or more rigs must be run simultaneously within 200 meters of each other, then effective public health buffer zones out to 200 meters (m) from the nearest emission source will be implemented. Examples of an effective public health protection buffer zone include the demarcation of a public access exclusion zone by signage at intervals of every 250 feet that is visible from a distance of 125 feet during daylight hours, and a physical buffer such as active surveillance to ensure the property is not accessible by the public during drilling operations. Alternatively, the proponent may demonstrate compliance with the 1-hour NO2 National Ambient Air Quality Standards (NAAQS) with appropriate and accepted near-field modeling. As part of this demonstration, the proponent may propose alternative mitigation that could include but is not limited to natural gas–fired drill rigs, installation of NOX controls, time/use restrictions, and/or drill rig spacing.
- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horse power must not emit more than 2 grams of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 grams of NOx per horsepower-hour.
- Green completions would be used for all well completion activities where technically feasible.
- Employ enhanced VOC emission controls with 95% control efficiency on production equipment having a potential to emit greater than 5 tons per year.
- The reserve pit will be fenced on three sides prior to drilling activity and closed off on the fourth side after drilling is finished. The reserve pits for the wells will be lined with a 16 ml liner with felt.
- A dike will be constructed around those production facilities that contain fluids. The dikes will be constructed of compacted subsoil. They will be impervious, hold 10 percent more than the capacity of the largest tank, and be independent of the back cut.

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- All permanent (meaning on site for six months or longer) structures will be painted Covert Green to match the surrounding landscape color unless otherwise authorized. This will include all facilities except those required to comply with Occupational Safety and Health Act (OSHA) regulations.
- If dry, the wells will be plugged and abandoned as per BLM and State of Utah requirements.
- Prior to construction, an invasive plants/noxious weeds inventory will be completed for all areas where surface disturbance will occur. A completed Weed Inventory form documenting any occurrences of invasive plants or noxious weeds will be submitted to the BLM Authorized Officer before surface disturbance will occur.
- All vehicles and equipment would be cleaned either through power-washing, or other approved method, if the vehicles or equipment are brought in from areas outside the Uinta Basin, to prevent weed seed introduction.
- The operator will control noxious/invasive weeds along their roads, pipelines, well sites, or other applicable facilities by the application of herbicides or by mechanical removal until reclamation is considered to be successful by the authorized officer (AO) and the bond for the well is released. A list of noxious weeds will be obtained from the BLM or the appropriate county extension office. On BLM-administered land, the operator will submit a Pesticide Use Proposal and obtain approval prior to the application of herbicides, other pesticides, or possible hazardous chemicals.
- Immediately upon well completion, the location and surrounding area shall be cleared of all unused tubing, equipment, debris, materials, and trash. Any hydrocarbons in the pit will be removed in accordance with 43 CFR 3162.7-1.
- The reserve pit and the portion of the well not needed for production facilities/operations shall be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 120 days from the date of well completion, or as soon as environmental conditions allow. The stockpiled pit topsoil will then be spread over the pit area and broadcast-seeded/drill seeded (preferred method) with a seed mix submitted to the BLM Authorized Officer (AO) for approval prior to seeding. Seeding will be done in the fall prior to winter freezing of the soil. The seed mixture shall be worked into the topsoil with a drill seeder, bulldozer or other heavy equipment. If initial seeding is not successful, reseeding may be required.
- Once the well is plugged and facilities are removed and abandoned, the topsoil shall be stripped and stockpiled off of the location, and the well site, pipelines, and access roads will be returned to natural contours. The topsoil shall be respread, and the location seeded with the mixture submitted to the BLM AO. The seed mixture shall be worked into the topsoil with a drill seeder, bulldozer or other heavy equipment.
- Interim reclamation, final reclamation, and monitoring of reclaimed areas will be completed in accordance with the QEP Energy Company, Uinta Basin Division's Reclamation Plan, September 2009 on file with the Vernal Field Office of the BLM.
- Prior to any surface disturbance, vegetative monitoring locations and reference sites will be identified by QEP and approved by the BLM AO. Vegetation monitoring protocol will be developed by QEP and approved by the BLM AO prior to implementation of revegetation techniques and will be designed to monitor % basal vegetative cover.
- Revegetated areas will be inspected annually and monitored to document location and extent of areas with successful revegetation, and areas needing further reclamation (for a period of 5 years after construction completion). A reclamation report will be submitted to the AO by March 31 of each year.

- QEP has agreed not to construct or drill during the following dates, unless otherwise determined by the BLM Authorized Officer.

Table 2-2 Raptor nesting timing restriction

Well Name	Burrowing Owl: March 1 to August 31
CPF	Yes
RW 23-23B Pad	No
RW 44-22B Pad	No
RW 43-27B Pad	No

Yes indicates QEP would not drill or construct during this time period.

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- QEP will educate its contractors and employees about the relevant federal regulations intended to protect paleontological and cultural resources. All vehicular traffic, personnel movement, construction, and restoration activities shall be confined to areas cleared by the site inventory and to existing roads. If any potential paleontological or cultural resources are uncovered during construction, work will stop immediately in the area and the appropriate BLM AO will be notified.

DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)

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SITE SPECIFIC DOWNHOLE COAs:

- Gamma ray Log shall be run from Total Depth to Surface.
- CBL will be run from TD to TOC.

Variances Granted:

Air Drilling

- Properly lubricated and maintained rotating head. Variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore. Variance granted for blooie line discharge to be 50' to 70' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressors located 50' from the well bore.
- In lieu of mud products on location, operator will fill a 400 bbl tank with water for the kill medium.
- Automatic igniter. Variance granted for igniter, a diffuser will be used instead. Operator will mount a deflector at the end of the blooie line to change direction and reduce the velocity of the cuttings flow to the reserve pit.
- Flare pit. Variance granted, there is no need of a flare during the drilling of the surface hole.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order

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No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.

- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.

- No aggressive/fresh hard-banded drill pipe shall be used within casing.

- **Cement baskets shall not be run on surface casing.**

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

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OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.

- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.

    - Well name and number.

    - Well location (¼¼, Sec., Twn, Rng, and P.M.).

    - Date well was placed in a producing status (date of first production for which royalty will be paid).

    - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).

    - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.

    - Unit agreement and/or participating area name and number, if applicable.

    - Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of

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the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of

the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

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BLM - Vernal Field Office - Notification Form

Operator QEP Rig Name/# Pete Martin Submitted By Floyd Martinez
Phone Number 435-828-0315
Well Name/Number RW 15C1-23B
Qtr/Qtr NE/SW Section 23 Township 7S Range 23E
Lease Serial Number UTU 082
API Number 4304752316 0000

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time September 1-2012 AM ☒ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☐ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☒ Other

Date/Time _____ AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time _____ AM ☐ PM ☐

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Remarks Spud Conductor

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: QEP ENERGY COMPANY
Address: 11002 EAST 17500 SOUTH
city VERNAL
state UT zip 84078

Operator Account Number: N 3700
Phone Number: (435) 781-4369

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752315	RW 15B1-23B		NESW	23	7S	23E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	18478	8/31/2012			9/21/2012	

Comments: WMMFD
BHL: SWSE
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Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752319	RW 15B4-23B		NESW	23	7S	23E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	18478	9/1/2012			9/21/2012	

Comments: WMMFD
BHL: SWSE
CONFIDENTIAL

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752316	RW 15C1-23B		NESW	23	7S	23E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	18478	9/1/2012			9/21/2012	

Comments: WMMFD
BHL: SWSE
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ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Valyn Davis
Name (Please Print)
Valyn Davis
Signature
Regulatory Affairs Analyst
Title
9/10/2012
Date

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SEP 10 2012
Div. of Oil, Gas & Mining

(5/2000)

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BLM - Vernal Field Office - Notification Form

Operator QEP ENERGY Rig Name/# HWD #8
Submitted By JIMMY KITTRELL Phone Number 435-828-0394 / 970-812-0016
Well Name/Number RW 15C1-23B
Qtr/Qtr NE/SW Section 23 Township 7S Range 23E
Lease Serial Number UTU 082
API Number 43-047-523160000

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 10/17/2012 19:00 AM ☐ PM ☒

Casing – Please report time casing run starts, not cementing times.

- ☐ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

Date/Time _____ __ AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time _ _____ AM ☐ PM ☐

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OCT 17 2012
DIV. OF OIL, GAS & MINING

Remarks SKID RIG OVER RW 15C1-23B & WE WILL BE DRILLING SURFACE HOLE 10/17/2012
WILL CALL IF ANY DELAYED

CONFIDENTIAL

BLM - Vernal Field Office - Notification Form

Operator QEP Rig Name/# HWD 8 Submitted By MURRAY BECKER Phone Number 435-828-0394

Well Name/Number RW 15C1-23B
Qtr/Qtr NE/SW Section 23 Township 7 S Range 23 E
Lease Serial Number UTU 082
API Number 43-047-52316

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time _____ _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

Date/Time 10/22/2012 23:00HRS. ___ AM ☐ PM ☒

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time _ ___ AM ☐ PM ☐

RECEIVED
OCT 2 3 2012
DIV. OF OIL, GAS & MINING

Remarks IF NO TROUBLE WITH LOST CIRC, THESE TIMES WILL BE CLOSE. RUNNING SURFACE CASING & CEMENT TO RW 15C1-23B API # 43-047-52316 10/21/2012 @ 23:00 HRS.

BLM - Vernal Field Office - Notification Form

Operator QEP Rig Name/# HWD 8 Submitted By RAY CHANDLER Phone Number 435-828-0394

Well Name/Number RW 15C1-23B
Qtr/Qtr NE/SW Section 23 Township 7 S Range 23 E
Lease Serial Number UTU 082
API Number 43-047-52316

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time _____ _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

☐ Surface Casing
☐ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

Date/Time __ ___ AM ☐ PM ☐

RECEIVED
JAN 08 2013
DIV. OF OIL, GAS & MINING

BOPE

☒ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time 1/9/2013 0600 AM ☒ PM ☐

Remarks _____

BLM - Vernal Field Office - Notification Form

Operator QEP Rig Name/# HWD 8 Submitted By WAYNE SANFORD Phone Number 435-828-0394

Well Name/Number RW 15C1-23B
Qtr/Qtr NE/SW Section 23 Township 7 S Range 23 E
Lease Serial Number UTU 082
API Number 43-047-52316

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time _____ _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☐ Surface Casing
- ☐ Intermediate Casing
- ☒ Production Casing
- ☐ Liner
- ☐ Other

Date/Time 1/23/2013 7:00 ___ AM ☐ PM ☒

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

RECEIVED
JAN 2 3 2013
DIV. OF OIL, GAS & MINING

Date/Time _____ __ AM ☐ PM ☐

Remarks _____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: RED WASH

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: RW 15C1-23B

2. NAME OF OPERATOR: QEP ENERGY COMPANY

9. API NUMBER: 43047523160000

3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, Ut, 84078

PHONE NUMBER: 303 308-3068 Ext

9. FIELD and POOL or WILDCAT: RED WASH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1736 FSL 2534 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 23 Township: 07.0S Range: 23.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 2/28/2013	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

NO ACTIVITY ON THIS WELL FOR THE MONTH OF FEBRUARY 2013.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
March 25, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Valyn Davis	435 781-4369	Regulatory Affairs Analyst
SIGNATURE N/A		**DATE** 3/25/2013

RECEIVED: Mar. 25, 2013

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: RED WASH

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: RW 15C1-23B

2. NAME OF OPERATOR: QEP ENERGY COMPANY

9. API NUMBER: 43047523160000

3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, Ut, 84078

PHONE NUMBER: 303 308-3068 Ext

9. FIELD and POOL or WILDCAT: RED WASH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1736 FSL 2534 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 23 Township: 07.0S Range: 23.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 3/31/2013	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

NO ACTIVITY ON THIS WELL DURING THE MONTH OF MARCH 2013.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
April 02, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Valyn Davis	435 781-4369	Regulatory Affairs Analyst
SIGNATURE N/A		**DATE** 4/1/2013

RECEIVED: Apr. 01, 2013

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: RED WASH

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: RW 15C1-23B

2. NAME OF OPERATOR: QEP ENERGY COMPANY

9. API NUMBER: 43047523160000

3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, Ut, 84078

PHONE NUMBER: 303 308-3068 Ext

9. FIELD and POOL or WILDCAT: RED WASH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1736 FSL 2534 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 23 Township: 07.0S Range: 23.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 4/30/2013	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

NO ACTIVITY ON THIS WELL DURING THE MONTH OF APRIL 2013.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
May 08, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Valyn Davis	435 781-4369	Regulatory Affairs Analyst

SIGNATURE	DATE
N/A	5/2/2013

RECEIVED: May. 02, 2013

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: RED WASH

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: RW 15C1-23B

2. NAME OF OPERATOR: QEP ENERGY COMPANY

9. API NUMBER: 43047523160000

3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, Ut, 84078

PHONE NUMBER: 303 308-3068 Ext

9. FIELD and POOL or WILDCAT: RED WASH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1736 FSL 2534 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 23 Township: 07.0S Range: 23.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ✓ SUBSEQUENT REPORT — Date of Work Completion: 5/7/2013
- ☐ SPUD REPORT — Date of Spud:
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

THIS WELL COMMENCED PRODUCTION ON MAY 7, 2013 @ 7:00 A.M.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
May 17, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Valyn Davis	435 781-4369	Regulatory Affairs Analyst

SIGNATURE	DATE
N/A	5/8/2013

RECEIVED: May. 08, 2013

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: RED WASH

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: RW 15C1-23B

2. NAME OF OPERATOR: QEP ENERGY COMPANY

9. API NUMBER: 43047523160000

3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, Ut, 84078

PHONE NUMBER: 303 308-3068 Ext

9. FIELD and POOL or WILDCAT: RED WASH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1736 FSL 2534 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 23 Township: 07.0S Range: 23.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 5/31/2013	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

NO ACTIVITY ON THIS WELL DURING THE MONTH OF MAY 2013.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
June 11, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Valyn Davis	435 781-4369	Regulatory Affairs Analyst
SIGNATURE N/A		**DATE** 6/10/2013

RECEIVED: Jun. 10, 2013

API Well Number: 43047523160000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

MD 11030 TVD 10076
PBMD 10005
PBTVD 10736
BHL 472 FSL 2201 FEL

AMENDED REPORT ☐ (highlight changes)

FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: UTU082

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ DRY ☐ OTHER

7. UNIT or CA AGREEMENT NAME: RED WASH

b. TYPE OF WORK: NEW WELL ☑ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

8. WELL NAME and NUMBER: RW 15C1-23B

2. NAME OF OPERATOR: QEP ENERGY COMPANY

9. API NUMBER: 4304752316

3. ADDRESS OF OPERATOR: 11002 E. 17500 S. CITY VERNAL STATE UT ZIP 84078

PHONE NUMBER: (435) 781-4320

10 FIELD AND POOL, OR WILDCAT: RED WASH

4. LOCATION OF WELL (FOOTAGES)

AT SURFACE: NESW 1736' FSL, 2534' FWL

AT TOP PRODUCING INTERVAL REPORTED BELOW: SWSE 492' FSL, 2319' FEL

AT TOTAL DEPTH: SWSE 480' FSL, 2320' FEL

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 23 7S 23E

12. COUNTY: UINTAH

13. STATE: UTAH

14. DATE SPUDDED: 9/1/2012

15. DATE T.D. REACHED: 1/21/2013

16. DATE COMPLETED: 5/3/2013 ABANDONED ☐ READY TO PRODUCE ☑

17. ELEVATIONS (DF, RKB, RT, GL): 5636' GL

18. TOTAL DEPTH: MD 10,885 TVD 10,746

19. PLUG BACK T.D.: MD TVD

20. IF MULTIPLE COMPLETIONS, HOW MANY? *

21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)

CBL

23.

WAS WELL CORED?	NO ☑	YES ☐	(Submit analysis)
WAS DST RUN?	NO ☑	YES ☐	(Submit report)
DIRECTIONAL SURVEY?	NO ☐	YES ☑	(Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
12.25	9.625 N-80	40	0	3,717		859	390	160	
7.875	4.5 P-110	11.6	0	11,017		2055	747		

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2.375	10,507							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) MESA VERDE	9,978	10,614		
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)		SIZE	NO. HOLES	PERFORATION STATUS
9,978	10,614	.42	106	Open ☐ Squeezed ☐
				Open ☐ Squeezed ☐
				Open ☐ Squeezed ☐
				Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
9,978 - 10,614	7,949 BBLS SLICKWATER; 179,840 LBS 30/50 SAND

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☑ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☑ OTHER: OPS SUMMARY

30. WELL STATUS: PGW

(5/2000)

(CONTINUED ON BACK)

RECEIVED: Jun. 18, 2013

API Well Number: 43047523160000

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
5/7/2013		5/8/2013		24			0	1,072	0	FLOWS
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:
22/64	915	1,927					0	1,072	0	

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

SOLD

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.

34. FORMATION (Log) MARKERS:

Name	Top (Measured Depth)
GREEN RIVER	2,873
BIRDS NEST	3,067
MAHOGANY	3,623
WASATCH	6,196
MESA VERDE	8,375
SEGO	10,832

35. ADDITIONAL REMARKS (Include plugging procedure)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) BENNA MUTH TITLE REGULATORY ASSISTANT - CONTRACT

SIGNATURE Benna Muth DATE 6/17/2013

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

RECEIVED: Jun. 18, 2013

API Well Number: 43047523160000

QEP Energy Company

Daily Activity and Cost Summary

Well Name: RW 15C1-23B

API	Surface Legal Location	Field Name	State	Well Configuration Type
43-047-52316	023007S023E27	RED WASH	UTAH	S-Well

Ground Elevation (ft)	Casing Flange Elevation (ft)	Current KB to GL (ft)	KB to CF (ft)	Spud Date	Final Rig Release
5,625.3	5,625.30	15.50	15.50	10/9/2012 05:00	1/26/2013 22:00

Job Category	Primary Job Type	Secondary Job Type	Objective
Drilling	DRILLING	DEVELOPMENT	

Start Date	Job End Date
10/18/2012	1/26/2013

Purpose

Summary

Contractor	RIG	Rig Type
Horizontal Well Drillers	HWD 8	ROTARY RIG
Horizontal Well Drillers	HWD 8	ROTARY RIG

DOL	Start Date	Summary
1.0	10/18/2012	SKID RIG, RIG UP, CLEAN MUD TANK,DRILL
2.0	10/19/2012	DRILL, SURVEY, SLIDE,RIG SERVICE
3.0	10/20/2012	DIRECTIONAL DRILL, SURVEY, RIG SERVICE, WIPER TRIP, CHG OUT SWIVEL PACKING
4.0	10/21/2012	DIRECTIONAL DRILL, SURVEY, TD SURFACE , BACKREAM FROM 3712 TO 3200
5.0	10/22/2012	SHORT TRIP, BACK REAM, CIRCULATE, TRIP OUT TO RUN SURFACE CASING, LAY DOWN DIRECTIONAL TOOLS,RIG CASING CREW AND RUN CASING
6.0	10/23/2012	RUN CASING, CIRC, CEMENT, TOP JOB. W O CEMENT,CUT CONDUCTOR AND CGS OFF & LAY DOWN, READY RIG TO SKID
7.0	1/8/2013	PREP AND WELD ON WELL HEADS ON NEXT TWO WELLS, TO SKID PREPARE RIG TO SKIID SKID RIG OVER WELL, RIG UP
8.0	1/9/2013	TEST BOP'S-PLUMB IN NEW STEAM LINES-CUT DRILL LINE-WORK ON PIPE HANDLER
9.0	1/10/2013	FINISH R/UP STEAM LINES-REPAIR PIPE HANDLER-STRAP BHA-M/UP BHA #2 & TRIP IN HOLE-DRILL SHOE TRACK & 10' NEW FORM--FIT-DRILL AHEAD
10.0	1/11/2013	DRILL- TROUBLE SHOOT & TRIP OUT FOR MWD-CHG OUT BIT-MOTOR-MWD PROBE-TRIP IN-RE-TAKE SURVEYS EVERY 90' F/ 3790'
11.0	1/12/2013	DIRECTIONAL DRILL-RIG REPAIR-RIG SERVICE-SURVEY/CONNECTIONS-MISC
12.0	1/13/2013	DIRECTIONAL DRILL--WIPER TRIP TO HELP SLIDE-RIG SERVICE-SURVEY/CONNECTIONS
13.0	1/14/2013	DRILL--CIRC--BLOW DOWN MUD LINES-TRIP FOR BIT--WORK BHA--TRIP IN
14.0	1/15/2013	TRIP IN HOLE--WASH/REAM TO BOTTOM--DRILLING--RIG SERVICE--SURVEY/CONNECTIONS
15.0	1/16/2013	DIRECTIONAL DRILL--RIG SERVICE--SURVEY/CONNECTIONS--RIG REPAIR--CHANGE SWIVEL PACKING
16.0	1/17/2013	DRILLING--RIG SERVICE--SURVEY/CONNECTIONS
17.0	1/18/2013	DRILLING--RIG SERVICE--SURVEY/CONNECTIONS--TRIP FOR BIT AT 10168'--RIG REPAIR
18.0	1/19/2013	TRIP IN HOLE--CHANGE OUT DRILL LINE--CIRC. OUT HEAVY MUD AT 7000'--RIG REPAIR--CHG OUT ROTATING HEAD--
19.0	1/20/2013	WASH TO BOTTOM--DRILLING--RIG SERVICE--SURVEY/CONNECTIONS--MISC (CHG SWAB IN PUMP)
20.0	1/21/2013	DRILL TO TD OF 10885'--CIRC--WIPER TRIP--CIRC--TRIP OUT TO LOG
21.0	1/22/2013	FINISH TRIP OUT & L/DN BHA--PJSM W/ THRU-BIT--RIG UP SAME--TRIP IN W/ LOGGING ASSEMBLY--STOPPED AT 10490'--LOG UP TO 3712 (SURFACE PIPE)--R/DN LOGGERS & M/UP THRU-BIT ASSEMBLY & TRIP IN HOLE
22.0	1/23/2013	TRIP IN HOLE TO CLEAN OUT FOR 2ND. LOGGING RUN, CIRCULATE BOTTOMS UP, WIPER TRIP TO 10200', CIRCULATE TRANSFER MUD FROM PREMIX MIX LCM FO R LOSSES, LOG WITH THRU BIT
23.0	1/24/2013	CIRCULATE DRY JOB OUT OF HOLE, TRIP TO BOTTOM, PUMP LCM SWEEP CIRCULATE BOTTOMS UP SPOT AND DISPLACE WALNUT HULLS IN OPEN HOLE, LAYDOWN PIPE RIG SERVICE, LAYDOWN PIPE AND BHA, PULL WEAR BUSHING RIG UP CASERS
24.0	1/25/2013	HELD PJSA RIG UP WEATHERFORD CASING CREW, RUN 4 1/2" PRODUCTION CASING CIRCULATE BTMS UP @ 3600', & BREAK CIRCULATION EVERY 20 JOINTS, CIRCULATE BTMS. UO @ 10,200'
25.0	1/26/2013	CIRCULATE RIG UP HALLIBURTON CEMENTERS, HELD PJSA SWAP LINES AND CEMENT 4 1/2" CASING ACCORDING TO CALCULATED VOLUMES, RIG DOWN CEMENTERS FLUSH BOP AND INSTALL PACK OFF, HELS JSA WITH GYRO DATA AND RIG UP GYRO WELL, CLEAN PITS , NIPPLE DOWN , HANG STACK, INSTALL NIGHT CAP

RECEIVED: Jun. 18, 2013

gyrodata

Gyrodata, Incorporated
301 Thelma Drive #433
Casper, WY 82609

Office: 307/234-7241
Fax: 307/234-6309

Directional Survey Certification

RE: (Survey Company): Gyrodata, Inc. **(Job Number):** RM0113GCMW157 **(Job Type):** Gyro Multi-shot Continuous

(Well Name & No.): RW #15C1-23B **(API No.):** 43-047-52316**(Operator):** QEP Energy

(Latitude): 40.192556 ° N **(Longitude):** 109.294697 ° W **(County & State)** Uintah County, Utah

NE 1/4 SW 1/4, SEC. 23, T7S, R23E

1736' F.S.L. – 2534' F.W.L.

(Run Date): 1/26/2013**(Report Generated Date):** 1/29/2013

(Survey MD) From: 0 FT. To: 11,000 FT. **(Tool Type):** North Seeking Gyro **(To the Bit):** 0 FT.

(Rig): HWD #8 **(R.K.B. Height):** 15 FT. **(Surveyor):** Chris Sulzen

"The data and calculations for this survey have been checked by me and conform to the calibration standards and operational procedures set forth by Gyrodata, Inc. I am authorized and qualified to review the data, calculations and this report, and that the report represents a true and correct Directional Survey of this well based on the original data corrected to True North and obtained at the well site. Wellbore coordinates are calculated using minimum curvature method"

Signature	Operations Manager Title	Gyrodata, Inc. Company	2/4/2013 Date

State of **Utah)**

NOTARY PUBLIC
L. MACIAS
STATE OF WYOMING
COUNTY OF NATRONA
My Commission Expires Jan 18, 2016

County of **Uintah)**

On this 4 day of February, 2013, before me personally appeared Joel Sulzen to me known as the person described in and who executed the forgoing instrument and acknowledged that (s)he executed the same as his/her free act and deed.

SEAL: _____ Notary Public

1/18/2016
My Commission Expires

Serving the Worldwide Energy Industry with Precision Survey Instrumentation

RECEIVED: Jun. 18, 2013

API Well Number: 4304752316000

A Gyrodata Directional Survey

FINAL DEFINITIVE COPY

for

QEP ENERGY COMPANY

Lease: RW Well: 15C1-23B, 4-1/2" Casing

Location: HWD #8, Uintah County, Utah

NE ¼ SW ¼, SEC. 23, T7S, R23E

1736' F.S.L. – 2534' F.W.L.

gyrodata

Job Number: RM0113GCMW157

Run Date: 26 Jan 2013
Report Generated: 29 Jan 2013 04:30

Surveyor: Chris Sulzen

Calculation Method: MINIMUM CURVATURE

Survey surface coordinates obtained from: Well Plan/Plot
Survey Latitude: 40.192556 deg. N Longitude: 109.294697 deg. W

Azimuth Correction:

Gyro: Bearings are Relative to True North

Depth Reference: Rotary Table

Rotary Table Elevation: 15.00

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

RECEIVED: Jun. 18, 2013

API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

0 – 11,000 FT. RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 4-1/2"CASING
ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO HWD #8, R.K.B. OF 15 FT.
PROJECTED TO TD @ 11,030 FT.

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
15.00	0.00	0.00	N 0 0 E	0.00	0.00	0.0	0.0	0.00 N	0.00 E
100.00	0.44	64.33	N 64 20 E	0.03	85.00	0.3	64.3	0.14 N	0.29 E
105.00	0.44	62.09	N 62 5 E	0.02	90.00	0.4	64.2	0.16 N	0.33 E
110.00	0.42	61.80	N 61 48 E	0.02	95.00	0.4	64.0	0.17 N	0.36 E
115.00	0.41	61.55	N 61 33 E	0.01	100.00	0.4	63.8	0.19 N	0.39 E
120.00	0.41	61.66	N 61 39 E	0.00	105.00	0.5	63.6	0.21 N	0.42 E
125.00	0.41	61.30	N 61 18 E	0.00	110.00	0.5	63.5	0.23 N	0.45 E
130.00	0.42	62.14	N 62 9 E	0.01	115.00	0.5	63.4	0.24 N	0.49 E
135.00	0.42	64.35	N 64 21 E	0.02	120.00	0.6	63.4	0.26 N	0.52 E
140.00	0.41	65.63	N 65 38 E	0.01	125.00	0.6	63.5	0.28 N	0.55 E
145.00	0.40	63.81	N 63 49 E	0.02	130.00	0.7	63.5	0.29 N	0.58 E
150.00	0.42	61.45	N 61 27 E	0.02	135.00	0.7	63.5	0.31 N	0.62 E
155.00	0.43	62.70	N 62 42 E	0.01	140.00	0.7	63.4	0.32 N	0.65 E
160.00	0.43	62.43	N 62 26 E	0.00	145.00	0.8	63.4	0.34 N	0.68 E
165.00	0.42	59.13	N 59 8 E	0.03	150.00	0.8	63.2	0.36 N	0.71 E

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QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
170.00	0.43	59.00	N 59 0 E	0.01	155.00	0.8	63.1	0.38 N	0.75 E
175.00	0.44	58.32	N 58 19 E	0.01	160.00	0.9	62.9	0.40 N	0.78 E
180.00	0.42	59.80	N 59 48 E	0.02	165.00	0.9	62.7	0.42 N	0.81 E
185.00	0.40	61.32	N 61 19 E	0.02	170.00	0.9	62.6	0.44 N	0.84 E
190.00	0.43	60.48	N 60 29 E	0.03	175.00	1.0	62.6	0.45 N	0.87 E
195.00	0.45	61.44	N 61 27 E	0.02	180.00	1.0	62.5	0.47 N	0.91 E
200.00	0.43	60.73	N 60 44 E	0.02	185.00	1.1	62.5	0.49 N	0.94 E
205.00	0.43	60.36	N 60 22 E	0.00	190.00	1.1	62.4	0.51 N	0.97 E
210.00	0.43	59.53	N 59 32 E	0.01	195.00	1.1	62.3	0.53 N	1.01 E
215.00	0.43	58.97	N 58 58 E	0.00	200.00	1.2	62.2	0.55 N	1.04 E
220.00	0.42	58.22	N 58 13 E	0.02	205.00	1.2	62.1	0.57 N	1.07 E
225.00	0.42	58.86	N 58 51 E	0.00	210.00	1.2	62.0	0.59 N	1.10 E
230.00	0.42	61.58	N 61 35 E	0.02	215.00	1.3	61.9	0.60 N	1.13 E
235.00	0.44	61.32	N 61 19 E	0.02	220.00	1.3	61.9	0.62 N	1.17 E
240.00	0.43	61.02	N 61 1 E	0.02	225.00	1.4	61.9	0.64 N	1.20 E
245.00	0.43	57.94	N 57 56 E	0.02	230.00	1.4	61.8	0.66 N	1.23 E
250.00	0.44	56.56	N 56 33 E	0.01	235.00	1.4	61.7	0.68 N	1.26 E
255.00	0.44	57.91	N 57 55 E	0.01	239.99	1.5	61.6	0.70 N	1.30 E
260.00	0.44	58.69	N 58 41 E	0.01	244.99	1.5	61.5	0.72 N	1.33 E
265.00	0.44	58.95	N 58 57 E	0.00	249.99	1.5	61.5	0.74 N	1.36 E
270.00	0.44	61.28	N 61 17 E	0.02	254.99	1.6	61.4	0.76 N	1.39 E
275.00	0.44	62.05	N 62 3 E	0.01	259.99	1.6	61.4	0.78 N	1.43 E

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QEP Energy Company
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Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
280.00	0.44	60.44	N 60 27 E	0.01	264.99	1.7	61.4	0.80 N	1.46 E
285.00	0.45	60.02	N 60 1 E	0.01	269.99	1.7	61.4	0.82 N	1.50 E
290.00	0.45	59.31	N 59 18 E	0.01	274.99	1.7	61.4	0.84 N	1.53 E
295.00	0.45	59.83	N 59 50 E	0.01	279.99	1.8	61.3	0.86 N	1.56 E
300.00	0.44	59.22	N 59 13 E	0.01	284.99	1.8	61.3	0.87 N	1.60 E
305.00	0.45	58.01	N 58 1 E	0.01	289.99	1.9	61.2	0.90 N	1.63 E
310.00	0.44	59.48	N 59 29 E	0.01	294.99	1.9	61.2	0.92 N	1.66 E
315.00	0.45	59.93	N 59 56 E	0.01	299.99	1.9	61.1	0.93 N	1.70 E
320.00	0.45	59.13	N 59 8 E	0.01	304.99	2.0	61.1	0.95 N	1.73 E
325.00	0.44	59.78	N 59 47 E	0.01	309.99	2.0	61.1	0.97 N	1.76 E
330.00	0.45	59.08	N 59 5 E	0.01	314.99	2.1	61.0	0.99 N	1.80 E
335.00	0.45	58.92	N 58 55 E	0.00	319.99	2.1	61.0	1.01 N	1.83 E
340.00	0.46	59.44	N 59 27 E	0.01	324.99	2.1	61.0	1.03 N	1.86 E
345.00	0.46	60.71	N 60 43 E	0.01	329.99	2.2	61.0	1.05 N	1.90 E
350.00	0.46	62.42	N 62 25 E	0.01	334.99	2.2	61.0	1.07 N	1.93 E
355.00	0.47	62.19	N 62 12 E	0.01	339.99	2.3	61.0	1.09 N	1.97 E
360.00	0.46	61.31	N 61 19 E	0.01	344.99	2.3	61.0	1.11 N	2.01 E
365.00	0.45	61.48	N 61 29 E	0.01	349.99	2.3	61.0	1.13 N	2.04 E
370.00	0.46	61.22	N 61 13 E	0.00	354.99	2.4	61.0	1.15 N	2.08 E
375.00	0.46	60.43	N 60 26 E	0.01	359.99	2.4	61.0	1.17 N	2.11 E
380.00	0.47	62.43	N 62 26 E	0.02	364.99	2.5	61.0	1.19 N	2.15 E
385.00	0.46	62.73	N 62 44 E	0.01	369.99	2.5	61.0	1.21 N	2.18 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
390.00	0.43	62.34	N 62 20 E	0.03	374.99	2.5	61.1	1.23 N	2.22 E
395.00	0.43	60.89	N 60 53 E	0.01	379.99	2.6	61.1	1.24 N	2.25 E
400.00	0.45	62.05	N 62 3 E	0.02	384.99	2.6	61.1	1.26 N	2.28 E
405.00	0.46	61.86	N 61 51 E	0.01	389.99	2.6	61.1	1.28 N	2.32 E
410.00	0.46	61.45	N 61 27 E	0.00	394.99	2.7	61.1	1.30 N	2.35 E
415.00	0.46	61.07	N 61 4 E	0.01	399.99	2.7	61.1	1.32 N	2.39 E
420.00	0.47	60.51	N 60 31 E	0.01	404.99	2.8	61.1	1.34 N	2.42 E
425.00	0.47	61.64	N 61 38 E	0.01	409.99	2.8	61.1	1.36 N	2.46 E
430.00	0.47	62.71	N 62 43 E	0.01	414.99	2.9	61.1	1.38 N	2.50 E
435.00	0.46	63.32	N 63 19 E	0.01	419.99	2.9	61.1	1.40 N	2.53 E
440.00	0.45	64.16	N 64 10 E	0.01	424.99	2.9	61.2	1.41 N	2.57 E
445.00	0.46	64.28	N 64 17 E	0.00	429.99	3.0	61.2	1.43 N	2.60 E
450.00	0.45	64.74	N 64 44 E	0.00	434.99	3.0	61.3	1.45 N	2.64 E
455.00	0.45	65.01	N 65 1 E	0.01	439.99	3.1	61.3	1.46 N	2.68 E
460.00	0.44	63.52	N 63 31 E	0.02	444.99	3.1	61.3	1.48 N	2.71 E
465.00	0.43	61.91	N 61 55 E	0.01	449.99	3.1	61.4	1.50 N	2.74 E
470.00	0.44	63.05	N 63 3 E	0.01	454.99	3.2	61.4	1.52 N	2.78 E
475.00	0.46	63.41	N 63 25 E	0.02	459.99	3.2	61.4	1.53 N	2.81 E
480.00	0.45	65.10	N 65 6 E	0.01	464.99	3.2	61.4	1.55 N	2.85 E
485.00	0.44	65.24	N 65 15 E	0.01	469.99	3.3	61.5	1.57 N	2.89 E
490.00	0.43	65.60	N 65 36 E	0.01	474.99	3.3	61.5	1.58 N	2.92 E

RECEIVED: Jun. 18, 2013

API Well Number: 4304752316000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
495.00	0.42	65.94	N 65 56 E	0.01	479.99	3.4	61.6	1.60 N	2.95 E
500.00	0.43	65.34	N 65 20 E	0.00	484.99	3.4	61.6	1.61 N	2.99 E
505.00	0.43	64.07	N 64 4 E	0.01	489.99	3.4	61.7	1.63 N	3.02 E
510.00	0.45	62.28	N 62 17 E	0.02	494.99	3.5	61.7	1.65 N	3.06 E
515.00	0.47	62.44	N 62 26 E	0.02	499.99	3.5	61.7	1.67 N	3.09 E
520.00	0.48	62.51	N 62 31 E	0.01	504.99	3.6	61.7	1.69 N	3.13 E
525.00	0.46	63.64	N 63 39 E	0.02	509.99	3.6	61.7	1.70 N	3.16 E
530.00	0.45	63.27	N 63 16 E	0.01	514.99	3.6	61.7	1.72 N	3.20 E
535.00	0.45	63.10	N 63 6 E	0.01	519.99	3.7	61.7	1.74 N	3.24 E
540.00	0.45	61.03	N 61 2 E	0.02	524.99	3.7	61.7	1.76 N	3.27 E
545.00	0.46	60.58	N 60 35 E	0.01	529.99	3.8	61.7	1.78 N	3.31 E
550.00	0.47	61.86	N 61 52 E	0.01	534.99	3.8	61.7	1.80 N	3.34 E
555.00	0.48	60.73	N 60 44 E	0.01	539.99	3.8	61.7	1.82 N	3.38 E
560.00	0.48	61.01	N 61 0 E	0.00	544.99	3.9	61.7	1.84 N	3.41 E
565.00	0.49	59.06	N 59 3 E	0.02	549.99	3.9	61.7	1.86 N	3.45 E
570.00	0.50	57.55	N 57 33 E	0.02	554.99	4.0	61.7	1.88 N	3.49 E
575.00	0.50	57.69	N 57 42 E	0.00	559.98	4.0	61.6	1.90 N	3.52 E
580.00	0.50	57.36	N 57 22 E	0.01	564.98	4.0	61.6	1.93 N	3.56 E
585.00	0.50	55.97	N 55 58 E	0.01	569.98	4.1	61.5	1.95 N	3.60 E
590.00	0.51	55.34	N 55 20 E	0.01	574.98	4.1	61.5	1.98 N	3.63 E
595.00	0.54	57.22	N 57 13 E	0.03	579.98	4.2	61.4	2.00 N	3.67 E
600.00	0.56	57.16	N 57 10 E	0.03	584.98	4.2	61.3	2.03 N	3.71 E

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A Gyrodata Directional Survey

QEP Energy Company
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Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
605.00	0.56	57.68	N 57 41 E	0.01	589.98	4.3	61.3	2.05 N	3.75 E
610.00	0.56	56.49	N 56 30 E	0.01	594.98	4.3	61.3	2.08 N	3.79 E
615.00	0.56	56.45	N 56 27 E	0.00	599.98	4.4	61.2	2.11 N	3.83 E
620.00	0.57	55.63	N 55 38 E	0.01	604.98	4.4	61.1	2.14 N	3.88 E
625.00	0.59	56.08	N 56 5 E	0.01	609.98	4.5	61.1	2.16 N	3.92 E
630.00	0.59	56.20	N 56 12 E	0.00	614.98	4.5	61.0	2.19 N	3.96 E
635.00	0.59	56.47	N 56 28 E	0.00	619.98	4.6	61.0	2.22 N	4.00 E
640.00	0.60	56.19	N 56 11 E	0.01	624.98	4.6	60.9	2.25 N	4.05 E
645.00	0.59	55.88	N 55 53 E	0.00	629.98	4.7	60.9	2.28 N	4.09 E
650.00	0.58	55.55	N 55 33 E	0.02	634.98	4.7	60.8	2.31 N	4.13 E
655.00	0.58	55.83	N 55 50 E	0.01	639.98	4.8	60.8	2.34 N	4.17 E
660.00	0.59	54.95	N 54 57 E	0.01	644.98	4.8	60.7	2.37 N	4.22 E
665.00	0.59	54.57	N 54 34 E	0.01	649.98	4.9	60.6	2.40 N	4.26 E
670.00	0.59	55.22	N 55 13 E	0.01	654.98	4.9	60.6	2.43 N	4.30 E
675.00	0.59	55.15	N 55 9 E	0.00	659.98	5.0	60.5	2.45 N	4.34 E
680.00	0.60	54.89	N 54 54 E	0.01	664.98	5.0	60.5	2.48 N	4.39 E
685.00	0.60	54.26	N 54 16 E	0.01	669.98	5.1	60.4	2.51 N	4.43 E
690.00	0.60	54.39	N 54 24 E	0.01	674.98	5.1	60.3	2.54 N	4.47 E
695.00	0.62	53.70	N 53 42 E	0.01	679.98	5.2	60.3	2.58 N	4.51 E
700.00	0.62	53.41	N 53 25 E	0.00	684.98	5.3	60.2	2.61 N	4.56 E
705.00	0.63	54.78	N 54 47 E	0.02	689.98	5.3	60.2	2.64 N	4.60 E
710.00	0.63	56.13	N 56 8 E	0.01	694.98	5.4	60.1	2.67 N	4.65 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
715.00	0.63	56.24	N 56 15 E	0.00	699.98	5.4	60.1	2.70 N	4.69 E
720.00	0.64	56.30	N 56 18 E	0.01	704.98	5.5	60.0	2.73 N	4.74 E
725.00	0.67	56.47	N 56 28 E	0.03	709.98	5.5	60.0	2.76 N	4.78 E
730.00	0.65	57.40	N 57 24 E	0.02	714.98	5.6	60.0	2.80 N	4.83 E
735.00	0.64	57.47	N 57 28 E	0.02	719.98	5.6	59.9	2.83 N	4.88 E
740.00	0.64	56.61	N 56 37 E	0.01	724.98	5.7	59.9	2.86 N	4.93 E
745.00	0.65	57.25	N 57 15 E	0.01	729.98	5.8	59.9	2.89 N	4.97 E
750.00	0.65	57.67	N 57 40 E	0.01	734.98	5.8	59.8	2.92 N	5.02 E
755.00	0.66	56.98	N 56 59 E	0.01	739.98	5.9	59.8	2.95 N	5.07 E
760.00	0.65	57.02	N 57 1 E	0.01	744.97	5.9	59.8	2.98 N	5.12 E
765.00	0.64	55.79	N 55 48 E	0.01	749.97	6.0	59.8	3.01 N	5.16 E
770.00	0.65	57.73	N 57 44 E	0.02	754.97	6.0	59.7	3.04 N	5.21 E
775.00	0.65	56.81	N 56 48 E	0.01	759.97	6.1	59.7	3.07 N	5.26 E
780.00	0.65	56.26	N 56 16 E	0.01	764.97	6.1	59.7	3.10 N	5.31 E
785.00	0.66	56.42	N 56 25 E	0.01	769.97	6.2	59.7	3.13 N	5.35 E
790.00	0.67	58.38	N 58 23 E	0.02	774.97	6.3	59.6	3.17 N	5.40 E
795.00	0.66	60.05	N 60 3 E	0.02	779.97	6.3	59.6	3.20 N	5.45 E
800.00	0.65	63.67	N 63 40 E	0.04	784.97	6.4	59.7	3.22 N	5.50 E
805.00	0.61	69.92	N 69 55 E	0.08	789.97	6.4	59.7	3.24 N	5.55 E
810.00	0.59	78.82	N 78 49 E	0.10	794.97	6.5	59.8	3.26 N	5.60 E
815.00	0.62	85.01	N 85 1 E	0.07	799.97	6.5	60.0	3.27 N	5.66 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
820.00	0.64	90.42	S 89 35 E	0.06	804.97	6.6	60.2	3.27 N	5.71 E
825.00	0.67	99.76	S 80 14 E	0.11	809.97	6.6	60.5	3.26 N	5.77 E
830.00	0.75	113.05	S 66 57 E	0.18	814.97	6.7	60.9	3.24 N	5.83 E
835.00	0.87	122.29	S 57 43 E	0.18	819.97	6.7	61.4	3.21 N	5.89 E
840.00	0.98	128.33	S 51 40 E	0.15	824.97	6.7	62.0	3.16 N	5.96 E
845.00	1.09	133.77	S 46 14 E	0.14	829.97	6.8	62.7	3.11 N	6.02 E
850.00	1.19	138.23	S 41 46 E	0.14	834.97	6.8	63.5	3.03 N	6.09 E
855.00	1.32	140.08	S 39 55 E	0.13	839.97	6.8	64.4	2.95 N	6.16 E
860.00	1.37	141.52	S 38 29 E	0.07	844.96	6.9	65.4	2.86 N	6.24 E
865.00	1.43	142.40	S 37 36 E	0.06	849.96	6.9	66.4	2.76 N	6.31 E
870.00	1.47	143.73	S 36 16 E	0.06	854.96	6.9	67.4	2.66 N	6.39 E
875.00	1.50	144.42	S 35 35 E	0.03	859.96	7.0	68.4	2.56 N	6.47 E
880.00	1.53	145.66	S 34 20 E	0.04	864.96	7.0	69.5	2.45 N	6.54 E
885.00	1.63	148.18	S 31 49 E	0.12	869.96	7.0	70.6	2.33 N	6.62 E
890.00	1.81	150.97	S 29 2 E	0.20	874.95	7.0	71.8	2.20 N	6.69 E
895.00	1.98	153.24	S 26 46 E	0.19	879.95	7.1	73.1	2.06 N	6.77 E
900.00	2.06	154.67	S 25 20 E	0.10	884.95	7.1	74.5	1.90 N	6.85 E
905.00	2.15	155.70	S 24 18 E	0.09	889.94	7.1	75.9	1.73 N	6.92 E
910.00	2.23	156.92	S 23 5 E	0.10	894.94	7.2	77.5	1.56 N	7.00 E
915.00	2.34	157.48	S 22 31 E	0.10	899.94	7.2	79.0	1.37 N	7.08 E
920.00	2.44	158.10	S 21 54 E	0.11	904.93	7.3	80.6	1.18 N	7.16 E
925.00	2.60	158.61	S 21 23 E	0.16	909.93	7.3	82.3	0.98 N	7.24 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
930.00	2.83	159.94	S 20 4 E	0.23	914.92	7.4	84.1	0.76 N	7.32 E
935.00	3.07	160.76	S 19 14 E	0.24	919.92	7.4	86.0	0.51 N	7.41 E
940.00	3.17	161.06	S 18 56 E	0.10	924.91	7.5	88.0	0.26 N	7.50 E
945.00	3.24	161.28	S 18 43 E	0.07	929.90	7.6	90.1	0.01 S	7.59 E
950.00	3.31	161.44	S 18 33 E	0.07	934.89	7.7	92.1	0.28 S	7.68 E
955.00	3.38	161.74	S 18 16 E	0.08	939.88	7.8	94.1	0.56 S	7.77 E
960.00	3.46	162.14	S 17 51 E	0.08	944.88	7.9	96.1	0.84 S	7.86 E
965.00	3.57	163.03	S 16 58 E	0.12	949.87	8.0	98.1	1.13 S	7.95 E
970.00	3.73	164.08	S 15 55 E	0.17	954.86	8.2	100.1	1.44 S	8.04 E
975.00	3.94	164.48	S 15 31 E	0.21	959.84	8.3	102.2	1.76 S	8.13 E
980.00	4.09	164.58	S 15 25 E	0.15	964.83	8.5	104.3	2.10 S	8.23 E
985.00	4.22	165.41	S 14 35 E	0.14	969.82	8.7	106.4	2.45 S	8.32 E
990.00	4.36	165.92	S 14 5 E	0.15	974.80	8.9	108.5	2.81 S	8.41 E
995.00	4.47	166.25	S 13 45 E	0.11	979.79	9.1	110.5	3.18 S	8.51 E
1000.00	4.52	166.38	S 13 37 E	0.06	984.77	9.3	112.5	3.56 S	8.60 E
1005.00	4.59	166.27	S 13 44 E	0.06	989.76	9.5	114.4	3.95 S	8.69 E
1010.00	4.69	166.54	S 13 27 E	0.10	994.74	9.8	116.3	4.34 S	8.79 E
1015.00	4.81	166.61	S 13 23 E	0.12	999.73	10.1	118.1	4.74 S	8.88 E
1020.00	4.88	166.56	S 13 26 E	0.07	1004.71	10.4	119.9	5.16 S	8.98 E
1025.00	4.91	166.85	S 13 9 E	0.04	1009.69	10.7	121.5	5.57 S	9.08 E
1030.00	4.92	166.79	S 13 12 E	0.01	1014.67	11.0	123.1	5.99 S	9.18 E
1035.00	4.93	166.67	S 13 20 E	0.01	1019.65	11.3	124.6	6.41 S	9.28 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
1040.00	4.94	166.74	S 13 16 E	0.02	1024.63	11.6	126.0	6.82 S	9.38 E
1045.00	5.00	166.70	S 13 18 E	0.06	1029.61	11.9	127.4	7.25 S	9.48 E
1050.00	5.10	166.83	S 13 10 E	0.10	1034.60	12.3	128.7	7.68 S	9.58 E
1055.00	5.26	166.54	S 13 28 E	0.15	1039.58	12.6	130.0	8.11 S	9.68 E
1060.00	5.36	166.35	S 13 39 E	0.10	1044.55	13.0	131.2	8.56 S	9.79 E
1065.00	5.43	166.25	S 13 45 E	0.07	1049.53	13.4	132.3	9.02 S	9.90 E
1070.00	5.49	166.12	S 13 53 E	0.07	1054.51	13.8	133.4	9.48 S	10.01 E
1075.00	5.57	166.19	S 13 49 E	0.08	1059.49	14.2	134.5	9.95 S	10.13 E
1080.00	5.65	166.06	S 13 57 E	0.08	1064.46	14.6	135.5	10.43 S	10.25 E
1085.00	5.72	166.07	S 13 56 E	0.07	1069.44	15.0	136.5	10.91 S	10.37 E
1090.00	5.86	165.97	S 14 2 E	0.14	1074.41	15.5	137.4	11.40 S	10.49 E
1095.00	6.00	165.95	S 14 3 E	0.14	1079.38	15.9	138.3	11.90 S	10.61 E
1100.00	6.12	165.89	S 14 6 E	0.12	1084.36	16.4	139.1	12.41 S	10.74 E
1105.00	6.20	165.77	S 14 14 E	0.08	1089.33	16.9	139.9	12.93 S	10.87 E
1110.00	6.25	165.96	S 14 2 E	0.06	1094.30	17.4	140.7	13.45 S	11.00 E
1115.00	6.31	165.77	S 14 14 E	0.06	1099.27	17.9	141.5	13.98 S	11.14 E
1120.00	6.38	165.93	S 14 4 E	0.08	1104.24	18.4	142.2	14.52 S	11.27 E
1125.00	6.47	165.75	S 14 15 E	0.09	1109.21	18.9	142.9	15.06 S	11.41 E
1130.00	6.61	165.91	S 14 5 E	0.14	1114.17	19.4	143.5	15.61 S	11.55 E
1135.00	6.83	165.72	S 14 17 E	0.21	1119.14	20.0	144.1	16.18 S	11.69 E
1140.00	7.07	166.00	S 14 0 E	0.25	1124.10	20.5	144.8	16.77 S	11.84 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
1145.00	7.23	166.06	S 13 57 E	0.17	1129.06	21.1	145.4	17.37 S	11.99 E
1150.00	7.33	166.12	S 13 53 E	0.10	1134.02	21.7	146.0	17.99 S	12.14 E
1155.00	7.44	165.74	S 14 16 E	0.12	1138.98	22.3	146.5	18.61 S	12.30 E
1160.00	7.54	165.86	S 14 8 E	0.10	1143.94	22.9	147.1	19.24 S	12.46 E
1165.00	7.60	166.11	S 13 54 E	0.07	1148.90	23.5	147.6	19.88 S	12.62 E
1170.00	7.70	166.07	S 13 56 E	0.10	1153.85	24.2	148.1	20.53 S	12.78 E
1175.00	7.84	165.88	S 14 7 E	0.14	1158.81	24.8	148.6	21.18 S	12.94 E
1180.00	8.01	165.59	S 14 24 E	0.18	1163.76	25.5	149.0	21.85 S	13.11 E
1185.00	8.16	165.59	S 14 25 E	0.15	1168.71	26.2	149.5	22.53 S	13.29 E
1190.00	8.29	165.36	S 14 38 E	0.13	1173.66	26.8	149.9	23.23 S	13.47 E
1195.00	8.42	165.35	S 14 39 E	0.13	1178.60	27.5	150.3	23.93 S	13.65 E
1200.00	8.58	165.21	S 14 47 E	0.16	1183.55	28.3	150.7	24.64 S	13.84 E
1205.00	8.70	165.29	S 14 43 E	0.12	1188.49	29.0	151.1	25.37 S	14.03 E
1210.00	8.81	165.28	S 14 43 E	0.10	1193.43	29.7	151.4	26.11 S	14.22 E
1215.00	8.95	164.86	S 15 8 E	0.16	1198.37	30.5	151.8	26.85 S	14.42 E
1220.00	9.14	164.85	S 15 9 E	0.20	1203.31	31.2	152.1	27.61 S	14.63 E
1225.00	9.28	164.45	S 15 33 E	0.15	1208.25	32.0	152.4	28.38 S	14.84 E
1230.00	9.34	164.30	S 15 42 E	0.07	1213.18	32.8	152.7	29.16 S	15.06 E
1235.00	9.39	164.25	S 15 45 E	0.04	1218.11	33.6	153.0	29.94 S	15.28 E
1240.00	9.42	164.21	S 15 47 E	0.03	1223.05	34.4	153.2	30.73 S	15.50 E
1245.00	9.45	164.04	S 15 58 E	0.04	1227.98	35.2	153.5	31.52 S	15.72 E
1250.00	9.51	164.03	S 15 58 E	0.06	1232.91	36.0	153.7	32.31 S	15.95 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
1255.00	9.61	163.92	S 16 5 E	0.10	1237.84	36.9	154.0	33.11 S	16.18 E
1260.00	9.76	163.89	S 16 6 E	0.16	1242.77	37.7	154.2	33.92 S	16.41 E
1265.00	9.90	164.08	S 15 55 E	0.14	1247.70	38.5	154.4	34.74 S	16.65 E
1270.00	9.99	163.82	S 16 11 E	0.10	1252.62	39.4	154.6	35.57 S	16.89 E
1275.00	10.06	163.81	S 16 11 E	0.07	1257.55	40.2	154.8	36.40 S	17.13 E
1280.00	10.14	163.88	S 16 7 E	0.08	1262.47	41.1	155.0	37.25 S	17.37 E
1285.00	10.27	164.02	S 15 59 E	0.13	1267.39	42.0	155.2	38.10 S	17.62 E
1290.00	10.38	164.04	S 15 57 E	0.10	1272.31	42.9	155.4	38.96 S	17.87 E
1295.00	10.49	164.19	S 15 48 E	0.11	1277.23	43.8	155.5	39.83 S	18.11 E
1300.00	10.64	164.31	S 15 41 E	0.15	1282.14	44.7	155.7	40.71 S	18.36 E
1305.00	10.80	164.21	S 15 47 E	0.16	1287.05	45.6	155.9	41.61 S	18.61 E
1310.00	10.92	164.15	S 15 51 E	0.11	1291.96	46.5	156.1	42.51 S	18.87 E
1315.00	10.97	164.16	S 15 50 E	0.06	1296.87	47.5	156.2	43.43 S	19.13 E
1320.00	11.05	164.16	S 15 50 E	0.08	1301.78	48.4	156.4	44.34 S	19.39 E
1325.00	11.16	164.15	S 15 51 E	0.10	1306.69	49.4	156.5	45.27 S	19.65 E
1330.00	11.25	164.14	S 15 52 E	0.09	1311.59	50.3	156.7	46.21 S	19.92 E
1335.00	11.32	164.12	S 15 53 E	0.08	1316.50	51.3	156.8	47.15 S	20.19 E
1340.00	11.43	164.17	S 15 50 E	0.11	1321.40	52.3	157.0	48.10 S	20.46 E
1345.00	11.56	164.16	S 15 51 E	0.12	1326.30	53.3	157.1	49.05 S	20.73 E
1350.00	11.66	164.09	S 15 54 E	0.10	1331.19	54.3	157.2	50.02 S	21.00 E
1355.00	11.69	164.12	S 15 53 E	0.04	1336.09	55.3	157.3	50.99 S	21.28 E
1360.00	11.72	164.15	S 15 51 E	0.03	1340.99	56.3	157.5	51.97 S	21.56 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
1365.00	11.76	164.15	S 15 51 E	0.03	1345.88	57.3	157.6	52.95 S	21.84 E
1370.00	11.81	164.14	S 15 52 E	0.05	1350.78	58.3	157.7	53.93 S	22.11 E
1375.00	11.88	164.10	S 15 54 E	0.07	1355.67	59.3	157.8	54.92 S	22.40 E
1380.00	12.00	164.10	S 15 54 E	0.12	1360.56	60.3	157.9	55.91 S	22.68 E
1385.00	12.16	164.05	S 15 57 E	0.16	1365.45	61.4	158.0	56.92 S	22.97 E
1390.00	12.32	163.96	S 16 2 E	0.16	1370.34	62.4	158.1	57.94 S	23.26 E
1395.00	12.38	163.97	S 16 2 E	0.07	1375.22	63.5	158.2	58.97 S	23.55 E
1400.00	12.44	163.95	S 16 3 E	0.05	1380.11	64.6	158.3	60.00 S	23.85 E
1405.00	12.49	163.94	S 16 4 E	0.05	1384.99	65.6	158.4	61.04 S	24.15 E
1410.00	12.57	163.91	S 16 5 E	0.08	1389.87	66.7	158.5	62.08 S	24.45 E
1415.00	12.65	163.85	S 16 9 E	0.08	1394.75	67.8	158.6	63.13 S	24.75 E
1420.00	12.79	163.79	S 16 13 E	0.14	1399.63	68.9	158.7	64.18 S	25.06 E
1425.00	12.99	163.84	S 16 10 E	0.20	1404.50	70.0	158.8	65.25 S	25.37 E
1430.00	13.15	163.88	S 16 7 E	0.16	1409.37	71.1	158.8	66.34 S	25.68 E
1435.00	13.24	163.88	S 16 7 E	0.09	1414.24	72.3	158.9	67.44 S	26.00 E
1440.00	13.30	163.84	S 16 10 E	0.06	1419.10	73.4	159.0	68.54 S	26.32 E
1445.00	13.33	163.89	S 16 7 E	0.03	1423.97	74.6	159.1	69.65 S	26.64 E
1450.00	13.34	163.95	S 16 3 E	0.02	1428.84	75.7	159.1	70.75 S	26.96 E
1455.00	13.36	164.00	S 16 0 E	0.03	1433.70	76.9	159.2	71.86 S	27.28 E
1460.00	13.43	164.17	S 15 50 E	0.08	1438.56	78.0	159.3	72.98 S	27.60 E
1465.00	13.60	164.48	S 15 31 E	0.18	1443.43	79.2	159.4	74.10 S	27.91 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
1470.00	13.79	164.83	S 15 10 E	0.21	1448.28	80.4	159.4	75.24 S	28.22 E
1475.00	13.89	165.05	S 14 57 E	0.12	1453.14	81.6	159.5	76.40 S	28.54 E
1480.00	13.95	165.17	S 14 50 E	0.06	1457.99	82.8	159.6	77.56 S	28.84 E
1485.00	13.98	165.25	S 14 45 E	0.04	1462.84	84.0	159.7	78.73 S	29.15 E
1490.00	14.03	165.35	S 14 39 E	0.05	1467.70	85.2	159.8	79.90 S	29.46 E
1495.00	14.06	165.44	S 14 34 E	0.04	1472.55	86.4	159.8	81.07 S	29.77 E
1500.00	14.09	165.44	S 14 34 E	0.03	1477.40	87.6	159.9	82.25 S	30.07 E
1505.00	14.13	165.40	S 14 36 E	0.05	1482.25	88.8	160.0	83.43 S	30.38 E
1510.00	14.15	165.43	S 14 34 E	0.02	1487.09	90.0	160.1	84.61 S	30.69 E
1515.00	14.16	165.46	S 14 32 E	0.01	1491.94	91.2	160.1	85.79 S	30.99 E
1520.00	14.17	165.45	S 14 33 E	0.02	1496.79	92.4	160.2	86.98 S	31.30 E
1525.00	14.18	165.45	S 14 33 E	0.01	1501.64	93.7	160.3	88.16 S	31.61 E
1530.00	14.18	165.38	S 14 37 E	0.02	1506.49	94.9	160.3	89.35 S	31.92 E
1535.00	14.19	165.36	S 14 38 E	0.02	1511.33	96.1	160.4	90.54 S	32.23 E
1540.00	14.21	165.41	S 14 35 E	0.02	1516.18	97.3	160.5	91.72 S	32.54 E
1545.00	14.21	165.37	S 14 38 E	0.01	1521.03	98.5	160.5	92.91 S	32.84 E
1550.00	14.21	165.34	S 14 40 E	0.01	1525.87	99.8	160.6	94.10 S	33.15 E
1555.00	14.23	165.39	S 14 37 E	0.02	1530.72	101.0	160.6	95.29 S	33.47 E
1560.00	14.24	165.37	S 14 38 E	0.01	1535.57	102.2	160.7	96.48 S	33.78 E
1565.00	14.25	165.36	S 14 39 E	0.01	1540.41	103.4	160.8	97.67 S	34.09 E
1570.00	14.26	165.32	S 14 41 E	0.01	1545.26	104.7	160.8	98.86 S	34.40 E
1575.00	14.25	165.30	S 14 42 E	0.01	1550.11	105.9	160.9	100.05 S	34.71 E

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A Gyrodata Directional Survey

QEP Energy Company
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Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
1580.00	14.25	165.25	S 14 45 E	0.01	1554.95	107.1	160.9	101.24 S	35.02 E
1585.00	14.27	165.15	S 14 51 E	0.03	1559.80	108.4	161.0	102.43 S	35.34 E
1590.00	14.27	164.98	S 15 1 E	0.04	1564.64	109.6	161.0	103.62 S	35.66 E
1595.00	14.27	164.87	S 15 8 E	0.03	1569.49	110.8	161.1	104.81 S	35.98 E
1600.00	14.27	164.82	S 15 11 E	0.01	1574.33	112.0	161.1	106.00 S	36.30 E
1605.00	14.28	164.79	S 15 13 E	0.01	1579.18	113.3	161.1	107.19 S	36.62 E
1610.00	14.29	164.80	S 15 12 E	0.00	1584.03	114.5	161.2	108.38 S	36.94 E
1615.00	14.29	164.72	S 15 17 E	0.02	1588.87	115.7	161.2	109.57 S	37.27 E
1620.00	14.29	164.63	S 15 22 E	0.02	1593.72	117.0	161.3	110.76 S	37.60 E
1625.00	14.29	164.53	S 15 28 E	0.03	1598.56	118.2	161.3	111.95 S	37.92 E
1630.00	14.26	164.27	S 15 44 E	0.07	1603.41	119.4	161.3	113.14 S	38.26 E
1635.00	14.23	163.97	S 16 2 E	0.08	1608.25	120.7	161.3	114.32 S	38.59 E
1640.00	14.24	163.73	S 16 16 E	0.06	1613.10	121.9	161.4	115.50 S	38.93 E
1645.00	14.24	163.64	S 16 22 E	0.02	1617.95	123.1	161.4	116.68 S	39.28 E
1650.00	14.23	163.58	S 16 25 E	0.02	1622.79	124.3	161.4	117.86 S	39.63 E
1655.00	14.23	163.51	S 16 30 E	0.02	1627.64	125.6	161.4	119.04 S	39.97 E
1660.00	14.22	163.46	S 16 32 E	0.01	1632.49	126.8	161.5	120.22 S	40.32 E
1665.00	14.22	163.42	S 16 35 E	0.01	1637.33	128.0	161.5	121.40 S	40.67 E
1670.00	14.22	163.35	S 16 39 E	0.02	1642.18	129.3	161.5	122.57 S	41.03 E
1675.00	14.22	163.35	S 16 39 E	0.00	1647.03	130.5	161.5	123.75 S	41.38 E
1680.00	14.21	163.36	S 16 39 E	0.01	1651.87	131.7	161.5	124.93 S	41.73 E
1685.00	14.22	163.34	S 16 40 E	0.01	1656.72	132.9	161.5	126.10 S	42.08 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
1690.00	14.24	163.33	S 16 40 E	0.02	1661.57	134.2	161.6	127.28 S	42.43 E
1695.00	14.25	163.33	S 16 40 E	0.01	1666.41	135.4	161.6	128.46 S	42.79 E
1700.00	14.26	163.32	S 16 41 E	0.01	1671.26	136.6	161.6	129.64 S	43.14 E
1705.00	14.26	163.29	S 16 43 E	0.01	1676.11	137.9	161.6	130.82 S	43.49 E
1710.00	14.27	163.33	S 16 40 E	0.01	1680.95	139.1	161.6	132.00 S	43.85 E
1715.00	14.27	163.38	S 16 37 E	0.01	1685.80	140.3	161.6	133.18 S	44.20 E
1720.00	14.27	163.38	S 16 37 E	0.00	1690.64	141.6	161.7	134.36 S	44.55 E
1725.00	14.28	163.33	S 16 40 E	0.02	1695.49	142.8	161.7	135.54 S	44.91 E
1730.00	14.30	163.37	S 16 38 E	0.02	1700.33	144.0	161.7	136.72 S	45.26 E
1735.00	14.30	163.38	S 16 37 E	0.01	1705.18	145.3	161.7	137.91 S	45.61 E
1740.00	14.32	163.36	S 16 38 E	0.01	1710.02	146.5	161.7	139.09 S	45.97 E
1745.00	14.33	163.36	S 16 39 E	0.02	1714.87	147.7	161.7	140.28 S	46.32 E
1750.00	14.33	163.35	S 16 39 E	0.00	1719.71	149.0	161.7	141.46 S	46.68 E
1755.00	14.35	163.37	S 16 38 E	0.02	1724.56	150.2	161.8	142.65 S	47.03 E
1760.00	14.36	163.36	S 16 38 E	0.01	1729.40	151.4	161.8	143.84 S	47.39 E
1765.00	14.37	163.40	S 16 36 E	0.01	1734.24	152.7	161.8	145.02 S	47.74 E
1770.00	14.38	163.40	S 16 36 E	0.01	1739.09	153.9	161.8	146.21 S	48.09 E
1775.00	14.39	163.38	S 16 37 E	0.01	1743.93	155.2	161.8	147.40 S	48.45 E
1780.00	14.41	163.39	S 16 36 E	0.01	1748.77	156.4	161.8	148.60 S	48.81 E
1785.00	14.41	163.38	S 16 37 E	0.01	1753.62	157.6	161.8	149.79 S	49.16 E
1790.00	14.42	163.36	S 16 38 E	0.00	1758.46	158.9	161.8	150.98 S	49.52 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
1795.00	14.42	163.36	S 16 39 E	0.01	1763.30	160.1	161.9	152.17 S	49.87 E
1800.00	14.44	163.38	S 16 37 E	0.01	1768.14	161.4	161.9	153.37 S	50.23 E
1805.00	14.46	163.45	S 16 33 E	0.03	1772.99	162.6	161.9	154.56 S	50.59 E
1810.00	14.45	163.47	S 16 32 E	0.01	1777.83	163.9	161.9	155.76 S	50.94 E
1815.00	14.46	163.43	S 16 34 E	0.01	1782.67	165.1	161.9	156.96 S	51.30 E
1820.00	14.47	163.39	S 16 37 E	0.02	1787.51	166.4	161.9	158.15 S	51.65 E
1825.00	14.50	163.41	S 16 35 E	0.03	1792.35	167.6	161.9	159.35 S	52.01 E
1830.00	14.51	163.42	S 16 35 E	0.01	1797.19	168.9	161.9	160.55 S	52.37 E
1835.00	14.54	163.29	S 16 43 E	0.04	1802.03	170.1	161.9	161.75 S	52.73 E
1840.00	14.56	163.16	S 16 50 E	0.04	1806.87	171.4	162.0	162.96 S	53.09 E
1845.00	14.58	163.17	S 16 50 E	0.02	1811.71	172.6	162.0	164.16 S	53.45 E
1850.00	14.59	163.16	S 16 50 E	0.01	1816.55	173.9	162.0	165.37 S	53.82 E
1855.00	14.59	163.14	S 16 51 E	0.01	1821.39	175.2	162.0	166.57 S	54.18 E
1860.00	14.61	163.13	S 16 52 E	0.02	1826.23	176.4	162.0	167.78 S	54.55 E
1865.00	14.64	163.09	S 16 54 E	0.03	1831.07	177.7	162.0	168.99 S	54.92 E
1870.00	14.64	163.06	S 16 56 E	0.01	1835.90	178.9	162.0	170.19 S	55.28 E
1875.00	14.61	162.97	S 17 2 E	0.04	1840.74	180.2	162.0	171.40 S	55.65 E
1880.00	14.61	162.78	S 17 14 E	0.05	1845.58	181.5	162.0	172.61 S	56.02 E
1885.00	14.64	162.65	S 17 21 E	0.04	1850.42	182.7	162.0	173.81 S	56.40 E
1890.00	14.65	162.57	S 17 26 E	0.03	1855.25	184.0	162.0	175.02 S	56.78 E
1895.00	14.66	162.50	S 17 30 E	0.02	1860.09	185.3	162.0	176.23 S	57.16 E
1900.00	14.67	162.43	S 17 34 E	0.02	1864.93	186.5	162.0	177.43 S	57.54 E

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QEP Energy Company
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Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
1905.00	14.69	162.36	S 17 38 E	0.02	1869.77	187.8	162.0	178.64 S	57.92 E
1910.00	14.71	162.29	S 17 42 E	0.03	1874.60	189.1	162.0	179.85 S	58.31 E
1915.00	14.69	162.15	S 17 51 E	0.04	1879.44	190.3	162.0	181.06 S	58.69 E
1920.00	14.68	161.99	S 18 1 E	0.04	1884.28	191.6	162.0	182.26 S	59.09 E
1925.00	14.69	161.93	S 18 4 E	0.01	1889.11	192.9	162.0	183.47 S	59.48 E
1930.00	14.69	161.91	S 18 5 E	0.01	1893.95	194.1	162.0	184.67 S	59.87 E
1935.00	14.71	161.91	S 18 6 E	0.02	1898.78	195.4	162.0	185.88 S	60.27 E
1940.00	14.73	161.92	S 18 5 E	0.02	1903.62	196.7	162.0	187.09 S	60.66 E
1945.00	14.72	161.93	S 18 4 E	0.01	1908.46	197.9	162.0	188.30 S	61.05 E
1950.00	14.72	161.90	S 18 6 E	0.01	1913.29	199.2	162.0	189.50 S	61.45 E
1955.00	14.72	161.89	S 18 7 E	0.01	1918.13	200.5	162.0	190.71 S	61.84 E
1960.00	14.76	161.85	S 18 9 E	0.04	1922.96	201.8	162.0	191.92 S	62.24 E
1965.00	14.78	161.81	S 18 11 E	0.02	1927.80	203.0	162.0	193.13 S	62.64 E
1970.00	14.79	161.79	S 18 13 E	0.01	1932.63	204.3	162.0	194.34 S	63.03 E
1975.00	14.79	161.83	S 18 10 E	0.01	1937.47	205.6	162.0	195.56 S	63.43 E
1980.00	14.79	161.83	S 18 10 E	0.00	1942.30	206.9	162.0	196.77 S	63.83 E
1985.00	14.80	161.82	S 18 11 E	0.01	1947.14	208.1	162.0	197.98 S	64.23 E
1990.00	14.81	161.78	S 18 14 E	0.01	1951.97	209.4	162.0	199.20 S	64.63 E
1995.00	14.84	161.76	S 18 15 E	0.03	1956.80	210.7	162.0	200.41 S	65.03 E
2000.00	14.87	161.67	S 18 20 E	0.03	1961.64	212.0	162.0	201.63 S	65.43 E
2005.00	14.87	161.64	S 18 21 E	0.01	1966.47	213.3	162.0	202.85 S	65.83 E
2010.00	14.88	161.65	S 18 21 E	0.00	1971.30	214.5	162.0	204.06 S	66.24 E

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Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
2015.00	14.88	161.67	S 18 20 E	0.00	1976.13	215.8	162.0	205.28 S	66.64 E
2020.00	14.88	161.67	S 18 20 E	0.01	1980.97	217.1	162.0	206.50 S	67.05 E
2025.00	14.89	161.64	S 18 22 E	0.01	1985.80	218.4	162.0	207.72 S	67.45 E
2030.00	14.89	161.62	S 18 23 E	0.01	1990.63	219.7	162.0	208.94 S	67.86 E
2035.00	14.90	161.61	S 18 23 E	0.01	1995.46	221.0	162.0	210.16 S	68.26 E
2040.00	14.91	161.53	S 18 28 E	0.03	2000.29	222.3	162.0	211.38 S	68.67 E
2045.00	14.92	161.41	S 18 35 E	0.03	2005.13	223.5	162.0	212.60 S	69.08 E
2050.00	14.89	161.35	S 18 39 E	0.03	2009.96	224.8	162.0	213.82 S	69.49 E
2055.00	14.90	161.31	S 18 41 E	0.02	2014.79	226.1	162.0	215.04 S	69.90 E
2060.00	14.91	161.31	S 18 42 E	0.01	2019.62	227.4	162.0	216.25 S	70.31 E
2065.00	14.93	161.30	S 18 42 E	0.02	2024.45	228.7	162.0	217.47 S	70.72 E
2070.00	14.92	161.28	S 18 43 E	0.01	2029.28	230.0	162.0	218.69 S	71.14 E
2075.00	14.92	161.24	S 18 46 E	0.01	2034.12	231.3	162.0	219.91 S	71.55 E
2080.00	14.93	161.22	S 18 47 E	0.01	2038.95	232.5	162.0	221.13 S	71.96 E
2085.00	14.93	161.21	S 18 47 E	0.00	2043.78	233.8	162.0	222.35 S	72.38 E
2090.00	14.90	161.23	S 18 46 E	0.03	2048.61	235.1	162.0	223.57 S	72.79 E
2095.00	14.91	161.24	S 18 46 E	0.01	2053.44	236.4	162.0	224.79 S	73.21 E
2100.00	14.92	161.25	S 18 45 E	0.01	2058.27	237.7	162.0	226.01 S	73.62 E
2105.00	14.93	161.25	S 18 45 E	0.02	2063.10	239.0	162.0	227.23 S	74.04 E
2110.00	14.94	161.26	S 18 45 E	0.01	2067.94	240.3	161.9	228.45 S	74.45 E
2115.00	14.94	161.27	S 18 44 E	0.00	2072.77	241.6	161.9	229.67 S	74.86 E

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Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
2120.00	14.93	161.25	S 18 45 E	0.01	2077.60	242.9	161.9	230.89 S	75.28 E
2125.00	14.94	161.24	S 18 45 E	0.00	2082.43	244.1	161.9	232.11 S	75.69 E
2130.00	14.95	161.19	S 18 49 E	0.02	2087.26	245.4	161.9	233.33 S	76.11 E
2135.00	14.97	161.21	S 18 47 E	0.02	2092.09	246.7	161.9	234.55 S	76.52 E
2140.00	14.99	161.23	S 18 46 E	0.02	2096.92	248.0	161.9	235.77 S	76.94 E
2145.00	15.01	161.24	S 18 46 E	0.02	2101.75	249.3	161.9	237.00 S	77.36 E
2150.00	15.03	161.30	S 18 42 E	0.02	2106.58	250.6	161.9	238.23 S	77.77 E
2155.00	15.03	161.39	S 18 36 E	0.02	2111.41	251.9	161.9	239.46 S	78.19 E
2160.00	14.96	161.60	S 18 24 E	0.09	2116.24	253.2	161.9	240.68 S	78.60 E
2165.00	14.91	161.77	S 18 14 E	0.07	2121.07	254.5	161.9	241.91 S	79.00 E
2170.00	14.90	161.79	S 18 12 E	0.01	2125.90	255.8	161.9	243.13 S	79.40 E
2175.00	14.91	161.83	S 18 10 E	0.02	2130.73	257.1	161.9	244.35 S	79.81 E
2180.00	14.93	161.88	S 18 7 E	0.02	2135.56	258.3	161.9	245.57 S	80.21 E
2185.00	14.93	161.86	S 18 8 E	0.01	2140.39	259.6	161.9	246.80 S	80.61 E
2190.00	14.92	161.86	S 18 8 E	0.00	2145.23	260.9	161.9	248.02 S	81.01 E
2195.00	14.92	161.89	S 18 7 E	0.01	2150.06	262.2	161.9	249.24 S	81.41 E
2200.00	14.92	161.92	S 18 5 E	0.01	2154.89	263.5	161.9	250.47 S	81.81 E
2205.00	14.89	161.94	S 18 4 E	0.03	2159.72	264.8	161.9	251.69 S	82.21 E
2210.00	14.85	162.00	S 18 0 E	0.04	2164.55	266.1	161.9	252.91 S	82.60 E
2215.00	14.83	161.99	S 18 0 E	0.01	2169.39	267.3	161.9	254.13 S	83.00 E
2220.00	14.84	161.99	S 18 0 E	0.00	2174.22	268.6	161.9	255.35 S	83.40 E
2225.00	14.84	162.02	S 17 59 E	0.01	2179.05	269.9	161.9	256.56 S	83.79 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
2230.00	14.85	162.02	S 17 59 E	0.01	2183.89	271.2	161.9	257.78 S	84.19 E
2235.00	14.86	162.04	S 17 57 E	0.01	2188.72	272.5	161.9	259.00 S	84.58 E
2240.00	14.85	162.11	S 17 53 E	0.02	2193.55	273.7	161.9	260.22 S	84.98 E
2245.00	14.84	162.05	S 17 57 E	0.02	2198.38	275.0	161.9	261.44 S	85.37 E
2250.00	14.85	162.01	S 17 59 E	0.01	2203.22	276.3	161.9	262.66 S	85.77 E
2255.00	14.86	162.04	S 17 57 E	0.02	2208.05	277.6	161.9	263.88 S	86.16 E
2260.00	14.86	162.02	S 17 59 E	0.01	2212.88	278.9	161.9	265.10 S	86.56 E
2265.00	14.87	161.99	S 18 1 E	0.01	2217.72	280.2	161.9	266.32 S	86.95 E
2270.00	14.88	162.02	S 17 59 E	0.01	2222.55	281.4	161.9	267.54 S	87.35 E
2275.00	14.88	162.02	S 17 59 E	0.00	2227.38	282.7	161.9	268.76 S	87.75 E
2280.00	14.87	162.02	S 17 59 E	0.01	2232.21	284.0	161.9	269.98 S	88.14 E
2285.00	14.83	161.96	S 18 3 E	0.04	2237.05	285.3	161.9	271.20 S	88.54 E
2290.00	14.78	161.83	S 18 10 E	0.06	2241.88	286.6	161.9	272.41 S	88.94 E
2295.00	14.75	161.78	S 18 13 E	0.03	2246.72	287.8	161.9	273.62 S	89.33 E
2300.00	14.76	161.77	S 18 14 E	0.00	2251.55	289.1	161.9	274.83 S	89.73 E
2305.00	14.75	161.78	S 18 13 E	0.01	2256.39	290.4	161.9	276.04 S	90.13 E
2310.00	14.74	161.77	S 18 14 E	0.01	2261.22	291.7	161.9	277.25 S	90.53 E
2315.00	14.71	161.69	S 18 18 E	0.03	2266.06	292.9	161.9	278.46 S	90.93 E
2320.00	14.65	161.58	S 18 25 E	0.07	2270.89	294.2	161.9	279.66 S	91.33 E
2325.00	14.55	161.40	S 18 36 E	0.11	2275.73	295.5	161.9	280.86 S	91.73 E
2330.00	14.48	161.31	S 18 41 E	0.08	2280.57	296.7	161.9	282.04 S	92.13 E
2335.00	14.46	161.30	S 18 42 E	0.02	2285.41	298.0	161.9	283.23 S	92.53 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
2340.00	14.45	161.26	S 18 44 E	0.01	2290.26	299.2	161.9	284.41 S	92.93 E
2345.00	14.46	161.21	S 18 48 E	0.02	2295.10	300.5	161.9	285.59 S	93.33 E
2350.00	14.47	161.18	S 18 49 E	0.02	2299.94	301.7	161.9	286.77 S	93.73 E
2355.00	14.48	161.13	S 18 52 E	0.02	2304.78	303.0	161.9	287.96 S	94.14 E
2360.00	14.46	161.12	S 18 53 E	0.02	2309.62	304.2	161.9	289.14 S	94.54 E
2365.00	14.41	161.15	S 18 51 E	0.05	2314.46	305.4	161.9	290.32 S	94.94 E
2370.00	14.38	161.17	S 18 50 E	0.03	2319.31	306.7	161.9	291.50 S	95.34 E
2375.00	14.39	161.22	S 18 47 E	0.01	2324.15	307.9	161.9	292.67 S	95.74 E
2380.00	14.41	161.16	S 18 50 E	0.02	2328.99	309.2	161.9	293.85 S	96.15 E
2385.00	14.41	161.15	S 18 51 E	0.00	2333.84	310.4	161.9	295.03 S	96.55 E
2390.00	14.39	161.23	S 18 46 E	0.03	2338.68	311.7	161.9	296.20 S	96.95 E
2395.00	14.37	161.27	S 18 44 E	0.02	2343.52	312.9	161.9	297.38 S	97.35 E
2400.00	14.36	161.32	S 18 41 E	0.02	2348.37	314.1	161.9	298.55 S	97.75 E
2405.00	14.28	161.48	S 18 31 E	0.08	2353.21	315.4	161.9	299.72 S	98.14 E
2410.00	14.21	161.57	S 18 26 E	0.08	2358.06	316.6	161.9	300.89 S	98.53 E
2415.00	14.16	161.63	S 18 22 E	0.04	2362.90	317.8	161.9	302.05 S	98.92 E
2420.00	14.16	161.65	S 18 21 E	0.01	2367.75	319.1	161.9	303.22 S	99.30 E
2425.00	14.15	161.67	S 18 20 E	0.01	2372.60	320.3	161.9	304.38 S	99.69 E
2430.00	14.14	161.69	S 18 19 E	0.01	2377.45	321.5	161.9	305.54 S	100.07 E
2435.00	14.13	161.68	S 18 19 E	0.02	2382.30	322.7	161.9	306.70 S	100.45 E
2440.00	14.10	161.68	S 18 19 E	0.03	2387.15	323.9	161.9	307.85 S	100.84 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
2445.00	14.02	161.72	S 18 17 E	0.08	2392.00	325.2	161.9	309.01 S	101.22 E
2450.00	13.91	161.75	S 18 15 E	0.11	2396.85	326.4	161.9	310.15 S	101.60 E
2455.00	13.85	161.74	S 18 15 E	0.06	2401.70	327.6	161.9	311.29 S	101.97 E
2460.00	13.83	161.68	S 18 19 E	0.03	2406.56	328.8	161.9	312.43 S	102.35 E
2465.00	13.80	161.63	S 18 22 E	0.03	2411.41	330.0	161.9	313.56 S	102.72 E
2470.00	13.77	161.65	S 18 21 E	0.03	2416.27	331.1	161.9	314.69 S	103.10 E
2475.00	13.75	161.69	S 18 19 E	0.03	2421.13	332.3	161.9	315.82 S	103.47 E
2480.00	13.70	161.68	S 18 19 E	0.05	2425.98	333.5	161.9	316.95 S	103.85 E
2485.00	13.62	161.59	S 18 24 E	0.08	2430.84	334.7	161.9	318.07 S	104.22 E
2490.00	13.56	161.43	S 18 34 E	0.08	2435.70	335.9	161.9	319.18 S	104.59 E
2495.00	13.52	161.34	S 18 40 E	0.05	2440.56	337.1	161.9	320.29 S	104.96 E
2500.00	13.50	161.34	S 18 39 E	0.02	2445.42	338.2	161.9	321.40 S	105.34 E
2505.00	13.51	161.36	S 18 39 E	0.01	2450.29	339.4	161.9	322.50 S	105.71 E
2510.00	13.52	161.40	S 18 36 E	0.01	2455.15	340.6	161.9	323.61 S	106.08 E
2515.00	13.51	161.39	S 18 37 E	0.01	2460.01	341.7	161.8	324.72 S	106.46 E
2520.00	13.50	161.40	S 18 36 E	0.01	2464.87	342.9	161.8	325.82 S	106.83 E
2525.00	13.44	161.46	S 18 33 E	0.06	2469.73	344.1	161.8	326.93 S	107.20 E
2530.00	13.36	161.50	S 18 30 E	0.08	2474.60	345.2	161.8	328.03 S	107.57 E
2535.00	13.32	161.51	S 18 29 E	0.04	2479.46	346.4	161.8	329.12 S	107.93 E
2540.00	13.28	161.51	S 18 29 E	0.03	2484.33	347.5	161.8	330.21 S	108.30 E
2545.00	13.26	161.47	S 18 32 E	0.03	2489.19	348.7	161.8	331.30 S	108.66 E
2550.00	13.24	161.46	S 18 33 E	0.02	2494.06	349.8	161.8	332.39 S	109.03 E

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API Well Number: 4304752316000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
2555.00	13.23	161.54	S 18 28 E	0.02	2498.93	351.0	161.8	333.47 S	109.39 E
2560.00	13.21	161.66	S 18 21 E	0.03	2503.80	352.1	161.8	334.56 S	109.75 E
2565.00	13.15	161.73	S 18 16 E	0.06	2508.66	353.2	161.8	335.64 S	110.11 E
2570.00	13.08	161.92	S 18 5 E	0.09	2513.53	354.4	161.8	336.72 S	110.46 E
2575.00	13.04	162.29	S 17 42 E	0.09	2518.40	355.5	161.8	337.79 S	110.81 E
2580.00	13.03	162.45	S 17 33 E	0.04	2523.28	356.6	161.8	338.87 S	111.15 E
2585.00	13.03	162.55	S 17 27 E	0.02	2528.15	357.8	161.8	339.94 S	111.49 E
2590.00	13.03	162.58	S 17 25 E	0.01	2533.02	358.9	161.8	341.02 S	111.83 E
2595.00	13.02	162.52	S 17 29 E	0.02	2537.89	360.0	161.8	342.09 S	112.17 E
2600.00	13.00	162.50	S 17 30 E	0.02	2542.76	361.1	161.8	343.17 S	112.51 E
2605.00	13.02	162.53	S 17 28 E	0.02	2547.63	362.3	161.9	344.24 S	112.84 E
2610.00	13.03	162.66	S 17 20 E	0.03	2552.50	363.4	161.9	345.32 S	113.18 E
2615.00	13.04	162.71	S 17 18 E	0.01	2557.38	364.5	161.9	346.39 S	113.52 E
2620.00	13.02	162.78	S 17 13 E	0.02	2562.25	365.6	161.9	347.47 S	113.85 E
2625.00	13.02	162.79	S 17 13 E	0.00	2567.12	366.8	161.9	348.55 S	114.19 E
2630.00	13.03	162.79	S 17 13 E	0.00	2571.99	367.9	161.9	349.62 S	114.52 E
2635.00	13.04	162.76	S 17 14 E	0.02	2576.86	369.0	161.9	350.70 S	114.85 E
2640.00	13.04	162.75	S 17 15 E	0.00	2581.73	370.2	161.9	351.78 S	115.19 E
2645.00	13.04	162.76	S 17 14 E	0.00	2586.60	371.3	161.9	352.85 S	115.52 E
2650.00	13.05	162.71	S 17 17 E	0.01	2591.47	372.4	161.9	353.93 S	115.86 E
2655.00	13.08	162.65	S 17 21 E	0.03	2596.34	373.5	161.9	355.01 S	116.19 E
2660.00	13.10	162.66	S 17 20 E	0.02	2601.21	374.7	161.9	356.09 S	116.53 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
2665.00	13.10	162.76	S 17 14 E	0.02	2606.08	375.8	161.9	357.17 S	116.87 E
2670.00	13.10	162.75	S 17 15 E	0.00	2610.95	376.9	161.9	358.26 S	117.20 E
2675.00	13.12	162.71	S 17 17 E	0.02	2615.82	378.1	161.9	359.34 S	117.54 E
2680.00	13.12	162.64	S 17 22 E	0.02	2620.69	379.2	161.9	360.42 S	117.88 E
2685.00	13.13	162.60	S 17 24 E	0.01	2625.56	380.3	161.9	361.51 S	118.22 E
2690.00	13.10	162.67	S 17 20 E	0.03	2630.43	381.5	161.9	362.59 S	118.56 E
2695.00	13.07	162.74	S 17 16 E	0.04	2635.30	382.6	161.9	363.67 S	118.89 E
2700.00	13.05	162.74	S 17 16 E	0.01	2640.17	383.7	161.9	364.75 S	119.23 E
2705.00	13.04	162.67	S 17 20 E	0.02	2645.04	384.9	161.9	365.83 S	119.56 E
2710.00	13.03	162.71	S 17 18 E	0.02	2649.91	386.0	161.9	366.90 S	119.90 E
2715.00	13.02	162.73	S 17 16 E	0.01	2654.79	387.1	161.9	367.98 S	120.23 E
2720.00	13.01	162.65	S 17 21 E	0.02	2659.66	388.2	161.9	369.05 S	120.57 E
2725.00	13.02	162.61	S 17 23 E	0.02	2664.53	389.4	161.9	370.13 S	120.90 E
2730.00	13.04	162.67	S 17 20 E	0.03	2669.40	390.5	161.9	371.20 S	121.24 E
2735.00	13.02	162.77	S 17 14 E	0.03	2674.27	391.6	161.9	372.28 S	121.58 E
2740.00	12.99	162.85	S 17 9 E	0.04	2679.14	392.8	161.9	373.36 S	121.91 E
2745.00	12.99	162.83	S 17 10 E	0.00	2684.02	393.9	161.9	374.43 S	122.24 E
2750.00	12.99	162.82	S 17 11 E	0.01	2688.89	395.0	161.9	375.50 S	122.57 E
2755.00	13.00	162.79	S 17 13 E	0.01	2693.76	396.1	161.9	376.58 S	122.90 E
2760.00	13.02	162.82	S 17 11 E	0.02	2698.63	397.3	161.9	377.65 S	123.24 E
2765.00	13.02	162.86	S 17 8 E	0.01	2703.50	398.4	161.9	378.73 S	123.57 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
2770.00	12.98	162.82	S 17 11 E	0.03	2708.37	399.5	161.9	379.80 S	123.90 E
2775.00	12.95	162.73	S 17 16 E	0.04	2713.25	400.6	161.9	380.88 S	124.23 E
2780.00	12.93	162.84	S 17 10 E	0.04	2718.12	401.7	161.9	381.95 S	124.56 E
2785.00	12.88	163.05	S 16 57 E	0.07	2722.99	402.9	161.9	383.01 S	124.89 E
2790.00	12.85	162.98	S 17 1 E	0.03	2727.87	404.0	161.9	384.08 S	125.22 E
2795.00	12.85	162.92	S 17 5 E	0.01	2732.74	405.1	161.9	385.14 S	125.54 E
2800.00	12.86	162.88	S 17 7 E	0.02	2737.62	406.2	161.9	386.20 S	125.87 E
2805.00	12.87	162.85	S 17 9 E	0.02	2742.49	407.3	162.0	387.27 S	126.20 E
2810.00	12.88	162.89	S 17 7 E	0.01	2747.37	408.4	162.0	388.33 S	126.53 E
2815.00	12.89	162.94	S 17 4 E	0.02	2752.24	409.5	162.0	389.40 S	126.85 E
2820.00	12.89	162.96	S 17 2 E	0.01	2757.11	410.7	162.0	390.46 S	127.18 E
2825.00	12.89	162.91	S 17 6 E	0.01	2761.99	411.8	162.0	391.53 S	127.51 E
2830.00	12.89	162.86	S 17 8 E	0.01	2766.86	412.9	162.0	392.60 S	127.84 E
2835.00	12.90	162.88	S 17 7 E	0.01	2771.74	414.0	162.0	393.66 S	128.17 E
2840.00	12.91	162.92	S 17 5 E	0.01	2776.61	415.1	162.0	394.73 S	128.49 E
2845.00	12.92	162.95	S 17 3 E	0.01	2781.48	416.2	162.0	395.80 S	128.82 E
2850.00	12.93	162.96	S 17 2 E	0.02	2786.36	417.4	162.0	396.87 S	129.15 E
2855.00	12.94	162.87	S 17 8 E	0.02	2791.23	418.5	162.0	397.94 S	129.48 E
2860.00	12.95	162.85	S 17 9 E	0.01	2796.10	419.6	162.0	399.01 S	129.81 E
2865.00	12.94	162.90	S 17 6 E	0.02	2800.98	420.7	162.0	400.08 S	130.14 E
2870.00	12.96	162.94	S 17 4 E	0.02	2805.85	421.8	162.0	401.15 S	130.47 E
2875.00	12.97	162.98	S 17 1 E	0.02	2810.72	423.0	162.0	402.22 S	130.80 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
2880.00	12.98	163.02	S 16 59 E	0.01	2815.59	424.1	162.0	403.30 S	131.12 E
2885.00	12.98	163.00	S 17 0 E	0.01	2820.47	425.2	162.0	404.37 S	131.45 E
2890.00	12.99	162.94	S 17 3 E	0.02	2825.34	426.3	162.0	405.44 S	131.78 E
2895.00	13.01	163.05	S 16 57 E	0.03	2830.21	427.4	162.0	406.52 S	132.11 E
2900.00	13.03	163.13	S 16 52 E	0.03	2835.08	428.6	162.0	407.60 S	132.44 E
2905.00	13.02	163.13	S 16 52 E	0.01	2839.95	429.7	162.0	408.68 S	132.77 E
2910.00	13.01	163.00	S 17 0 E	0.03	2844.82	430.8	162.0	409.75 S	133.09 E
2915.00	13.05	163.01	S 16 59 E	0.04	2849.70	432.0	162.0	410.83 S	133.42 E
2920.00	13.10	163.03	S 16 58 E	0.05	2854.57	433.1	162.0	411.91 S	133.75 E
2925.00	13.21	163.07	S 16 56 E	0.11	2859.43	434.2	162.0	413.00 S	134.08 E
2930.00	13.34	163.15	S 16 51 E	0.13	2864.30	435.4	162.0	414.10 S	134.42 E
2935.00	13.44	163.26	S 16 44 E	0.10	2869.17	436.5	162.0	415.21 S	134.75 E
2940.00	13.53	163.20	S 16 48 E	0.10	2874.03	437.7	162.0	416.32 S	135.09 E
2945.00	13.64	163.16	S 16 51 E	0.11	2878.89	438.9	162.0	417.45 S	135.43 E
2950.00	13.73	163.25	S 16 45 E	0.09	2883.75	440.0	162.0	418.58 S	135.77 E
2955.00	13.78	163.27	S 16 44 E	0.05	2888.60	441.2	162.0	419.72 S	136.11 E
2960.00	13.86	163.26	S 16 44 E	0.08	2893.46	442.4	162.0	420.86 S	136.46 E
2965.00	13.95	163.23	S 16 46 E	0.09	2898.31	443.6	162.0	422.01 S	136.80 E
2970.00	14.07	163.20	S 16 48 E	0.12	2903.16	444.8	162.0	423.17 S	137.15 E
2975.00	14.19	163.12	S 16 53 E	0.12	2908.01	446.1	162.0	424.34 S	137.51 E
2980.00	14.34	162.93	S 17 4 E	0.16	2912.86	447.3	162.0	425.52 S	137.87 E
2985.00	14.58	162.74	S 17 16 E	0.24	2917.70	448.5	162.1	426.71 S	138.23 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
2990.00	14.80	162.59	S 17 25 E	0.23	2922.54	449.8	162.1	427.92 S	138.61 E
2995.00	14.91	162.50	S 17 30 E	0.11	2927.37	451.1	162.1	429.15 S	139.00 E
3000.00	14.96	162.49	S 17 31 E	0.05	2932.20	452.4	162.1	430.37 S	139.38 E
3005.00	15.00	162.43	S 17 34 E	0.04	2937.03	453.7	162.1	431.61 S	139.77 E
3010.00	15.06	162.34	S 17 39 E	0.06	2941.86	455.0	162.1	432.84 S	140.17 E
3015.00	15.11	162.30	S 17 42 E	0.06	2946.69	456.3	162.1	434.08 S	140.56 E
3020.00	15.14	162.22	S 17 47 E	0.04	2951.51	457.6	162.1	435.32 S	140.96 E
3025.00	15.18	162.14	S 17 52 E	0.04	2956.34	458.9	162.1	436.57 S	141.36 E
3030.00	15.20	162.07	S 17 56 E	0.03	2961.16	460.2	162.1	437.82 S	141.76 E
3035.00	15.21	162.05	S 17 57 E	0.01	2965.99	461.5	162.1	439.06 S	142.17 E
3040.00	15.22	162.04	S 17 58 E	0.01	2970.81	462.8	162.1	440.31 S	142.57 E
3045.00	15.23	162.08	S 17 55 E	0.01	2975.64	464.1	162.1	441.56 S	142.97 E
3050.00	15.23	162.09	S 17 55 E	0.01	2980.46	465.4	162.1	442.81 S	143.38 E
3055.00	15.23	162.15	S 17 51 E	0.02	2985.29	466.8	162.1	444.06 S	143.78 E
3060.00	15.23	162.12	S 17 53 E	0.01	2990.11	468.1	162.1	445.31 S	144.18 E
3065.00	15.25	162.01	S 17 59 E	0.03	2994.94	469.4	162.1	446.56 S	144.59 E
3070.00	15.26	162.01	S 18 0 E	0.02	2999.76	470.7	162.1	447.81 S	145.00 E
3075.00	15.27	162.08	S 17 55 E	0.02	3004.58	472.0	162.1	449.07 S	145.40 E
3080.00	15.26	162.03	S 17 58 E	0.02	3009.41	473.3	162.1	450.32 S	145.81 E
3085.00	15.23	161.94	S 18 4 E	0.04	3014.23	474.7	162.1	451.57 S	146.21 E
3090.00	15.20	161.80	S 18 12 E	0.05	3019.06	476.0	162.1	452.82 S	146.62 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
3095.00	15.18	161.65	S 18 21 E	0.04	3023.88	477.3	162.1	454.06 S	147.03 E
3100.00	15.15	161.52	S 18 29 E	0.05	3028.71	478.6	162.1	455.30 S	147.45 E
3105.00	15.03	161.09	S 18 54 E	0.16	3033.53	479.9	162.1	456.53 S	147.86 E
3110.00	14.85	160.42	S 19 35 E	0.26	3038.36	481.2	162.1	457.75 S	148.29 E
3115.00	14.70	159.85	S 20 9 E	0.21	3043.20	482.4	162.0	458.95 S	148.72 E
3120.00	14.63	159.66	S 20 20 E	0.08	3048.04	483.7	162.0	460.14 S	149.16 E
3125.00	14.61	159.54	S 20 27 E	0.04	3052.87	485.0	162.0	461.32 S	149.60 E
3130.00	14.62	159.46	S 20 32 E	0.02	3057.71	486.2	162.0	462.50 S	150.04 E
3135.00	14.63	159.43	S 20 34 E	0.02	3062.55	487.5	162.0	463.69 S	150.48 E
3140.00	14.65	159.49	S 20 30 E	0.02	3067.39	488.8	162.0	464.87 S	150.93 E
3145.00	14.65	159.60	S 20 24 E	0.03	3072.23	490.0	162.0	466.05 S	151.37 E
3150.00	14.66	159.53	S 20 28 E	0.02	3077.06	491.3	162.0	467.24 S	151.81 E
3155.00	14.67	159.41	S 20 35 E	0.03	3081.90	492.5	162.0	468.42 S	152.26 E
3160.00	14.67	159.41	S 20 35 E	0.00	3086.74	493.8	162.0	469.61 S	152.70 E
3165.00	14.67	159.49	S 20 31 E	0.02	3091.57	495.1	162.0	470.80 S	153.15 E
3170.00	14.68	159.52	S 20 29 E	0.01	3096.41	496.3	162.0	471.98 S	153.59 E
3175.00	14.68	159.56	S 20 26 E	0.01	3101.25	497.6	162.0	473.17 S	154.03 E
3180.00	14.68	159.53	S 20 28 E	0.01	3106.08	498.9	162.0	474.36 S	154.47 E
3185.00	14.70	159.48	S 20 31 E	0.02	3110.92	500.1	162.0	475.54 S	154.92 E
3190.00	14.71	159.48	S 20 31 E	0.01	3115.76	501.4	161.9	476.73 S	155.36 E
3195.00	14.71	159.59	S 20 25 E	0.03	3120.59	502.7	161.9	477.92 S	155.81 E
3200.00	14.71	159.60	S 20 24 E	0.00	3125.43	503.9	161.9	479.11 S	156.25 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
3205.00	14.72	159.58	S 20 25 E	0.01	3130.27	505.2	161.9	480.30 S	156.69 E
3210.00	14.73	159.58	S 20 25 E	0.01	3135.10	506.5	161.9	481.49 S	157.14 E
3215.00	14.73	159.60	S 20 24 E	0.01	3139.94	507.8	161.9	482.68 S	157.58 E
3220.00	14.73	159.58	S 20 25 E	0.00	3144.77	509.0	161.9	483.88 S	158.02 E
3225.00	14.73	159.58	S 20 25 E	0.00	3149.61	510.3	161.9	485.07 S	158.47 E
3230.00	14.72	159.58	S 20 25 E	0.00	3154.44	511.6	161.9	486.26 S	158.91 E
3235.00	14.76	159.58	S 20 25 E	0.04	3159.28	512.8	161.9	487.45 S	159.35 E
3240.00	14.79	159.57	S 20 26 E	0.03	3164.11	514.1	161.9	488.65 S	159.80 E
3245.00	14.77	159.61	S 20 23 E	0.02	3168.95	515.4	161.9	489.84 S	160.24 E
3250.00	14.73	159.70	S 20 18 E	0.05	3173.78	516.7	161.9	491.04 S	160.69 E
3255.00	14.63	159.85	S 20 9 E	0.10	3178.62	517.9	161.9	492.22 S	161.12 E
3260.00	14.53	160.02	S 19 59 E	0.11	3183.46	519.2	161.9	493.41 S	161.56 E
3265.00	14.47	160.20	S 19 48 E	0.08	3188.30	520.4	161.9	494.58 S	161.98 E
3270.00	14.46	160.30	S 19 42 E	0.03	3193.14	521.7	161.9	495.76 S	162.40 E
3275.00	14.44	160.37	S 19 38 E	0.03	3197.98	522.9	161.9	496.93 S	162.82 E
3280.00	14.43	160.40	S 19 36 E	0.02	3202.83	524.2	161.9	498.11 S	163.24 E
3285.00	14.43	160.39	S 19 37 E	0.01	3207.67	525.4	161.9	499.28 S	163.66 E
3290.00	14.44	160.41	S 19 36 E	0.01	3212.51	526.7	161.8	500.46 S	164.08 E
3295.00	14.45	160.42	S 19 35 E	0.01	3217.35	527.9	161.8	501.63 S	164.50 E
3300.00	14.45	160.46	S 19 32 E	0.01	3222.19	529.2	161.8	502.81 S	164.91 E
3305.00	14.44	160.49	S 19 31 E	0.01	3227.04	530.4	161.8	503.98 S	165.33 E
3310.00	14.37	160.39	S 19 37 E	0.07	3231.88	531.7	161.8	505.15 S	165.75 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
3315.00	14.30	160.32	S 19 41 E	0.08	3236.72	532.9	161.8	506.32 S	166.16 E
3320.00	14.27	160.35	S 19 39 E	0.03	3241.57	534.1	161.8	507.48 S	166.58 E
3325.00	14.23	160.32	S 19 41 E	0.04	3246.42	535.4	161.8	508.64 S	166.99 E
3330.00	14.21	160.28	S 19 43 E	0.02	3251.26	536.6	161.8	509.80 S	167.41 E
3335.00	14.19	160.28	S 19 43 E	0.03	3256.11	537.8	161.8	510.95 S	167.82 E
3340.00	14.15	160.28	S 19 43 E	0.04	3260.96	539.0	161.8	512.10 S	168.23 E
3345.00	14.10	160.23	S 19 46 E	0.04	3265.81	540.2	161.8	513.25 S	168.65 E
3350.00	14.08	160.35	S 19 39 E	0.04	3270.66	541.5	161.8	514.40 S	169.06 E
3355.00	14.02	160.49	S 19 31 E	0.07	3275.51	542.7	161.8	515.54 S	169.46 E
3360.00	13.93	160.57	S 19 26 E	0.09	3280.36	543.9	161.8	516.68 S	169.87 E
3365.00	13.91	160.67	S 19 20 E	0.03	3285.21	545.1	161.8	517.81 S	170.27 E
3370.00	13.91	160.60	S 19 24 E	0.02	3290.06	546.3	161.8	518.95 S	170.66 E
3375.00	13.92	160.60	S 19 24 E	0.01	3294.92	547.5	161.8	520.08 S	171.06 E
3380.00	13.94	160.61	S 19 23 E	0.01	3299.77	548.7	161.8	521.22 S	171.46 E
3385.00	13.92	160.62	S 19 23 E	0.01	3304.62	549.9	161.8	522.35 S	171.86 E
3390.00	13.90	160.51	S 19 29 E	0.04	3309.48	551.1	161.8	523.49 S	172.26 E
3395.00	13.85	160.37	S 19 38 E	0.06	3314.33	552.3	161.8	524.62 S	172.66 E
3400.00	13.76	160.25	S 19 45 E	0.09	3319.19	553.5	161.8	525.74 S	173.07 E
3405.00	13.68	160.19	S 19 48 E	0.07	3324.04	554.7	161.8	526.86 S	173.47 E
3410.00	13.65	160.02	S 19 59 E	0.05	3328.90	555.9	161.8	527.97 S	173.87 E
3415.00	13.63	159.89	S 20 6 E	0.04	3333.76	557.0	161.8	529.07 S	174.27 E

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API Well Number: 4304752316000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
3420.00	13.63	159.84	S 20 10 E	0.01	3338.62	558.2	161.8	530.18 S	174.68 E
3425.00	13.63	159.81	S 20 12 E	0.01	3343.48	559.4	161.8	531.29 S	175.09 E
3430.00	13.64	159.84	S 20 10 E	0.01	3348.34	560.6	161.8	532.39 S	175.49 E
3435.00	13.65	159.83	S 20 10 E	0.01	3353.20	561.7	161.8	533.50 S	175.90 E
3440.00	13.65	159.82	S 20 11 E	0.01	3358.06	562.9	161.7	534.61 S	176.31 E
3445.00	13.65	159.75	S 20 15 E	0.02	3362.92	564.1	161.7	535.72 S	176.71 E
3450.00	13.66	159.78	S 20 13 E	0.02	3367.77	565.3	161.7	536.82 S	177.12 E
3455.00	13.68	159.75	S 20 15 E	0.02	3372.63	566.5	161.7	537.93 S	177.53 E
3460.00	13.71	159.73	S 20 16 E	0.02	3377.49	567.7	161.7	539.04 S	177.94 E
3465.00	13.72	159.72	S 20 17 E	0.01	3382.35	568.8	161.7	540.15 S	178.35 E
3470.00	13.71	159.59	S 20 24 E	0.03	3387.21	570.0	161.7	541.27 S	178.76 E
3475.00	13.70	159.55	S 20 27 E	0.01	3392.06	571.2	161.7	542.38 S	179.18 E
3480.00	13.70	159.43	S 20 34 E	0.03	3396.92	572.4	161.7	543.48 S	179.59 E
3485.00	13.70	159.36	S 20 38 E	0.02	3401.78	573.6	161.7	544.59 S	180.01 E
3490.00	13.71	159.46	S 20 33 E	0.02	3406.64	574.8	161.7	545.70 S	180.42 E
3495.00	13.72	159.49	S 20 30 E	0.02	3411.49	575.9	161.7	546.81 S	180.84 E
3500.00	13.74	159.49	S 20 30 E	0.02	3416.35	577.1	161.7	547.92 S	181.26 E
3505.00	13.75	159.49	S 20 30 E	0.01	3421.21	578.3	161.7	549.04 S	181.67 E
3510.00	13.77	159.51	S 20 30 E	0.02	3426.06	579.5	161.7	550.15 S	182.09 E
3515.00	13.79	159.50	S 20 30 E	0.03	3430.92	580.7	161.7	551.27 S	182.51 E
3520.00	13.79	159.45	S 20 33 E	0.02	3435.78	581.9	161.7	552.38 S	182.92 E
3525.00	13.77	159.39	S 20 37 E	0.02	3440.63	583.1	161.7	553.50 S	183.34 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
3530.00	13.78	159.39	S 20 37 E	0.02	3445.49	584.3	161.7	554.61 S	183.76 E
3535.00	13.80	159.42	S 20 35 E	0.02	3450.34	585.5	161.7	555.73 S	184.18 E
3540.00	13.78	159.43	S 20 34 E	0.02	3455.20	586.6	161.7	556.84 S	184.60 E
3545.00	13.72	159.38	S 20 37 E	0.06	3460.06	587.8	161.7	557.95 S	185.02 E
3550.00	13.61	159.27	S 20 44 E	0.11	3464.92	589.0	161.6	559.06 S	185.43 E
3555.00	13.42	158.95	S 21 3 E	0.20	3469.78	590.2	161.6	560.15 S	185.85 E
3560.00	13.11	158.21	S 21 48 E	0.35	3474.64	591.3	161.6	561.22 S	186.27 E
3565.00	12.78	157.45	S 22 33 E	0.38	3479.52	592.4	161.6	562.26 S	186.69 E
3570.00	12.58	157.10	S 22 54 E	0.21	3484.39	593.5	161.6	563.27 S	187.12 E
3575.00	12.49	156.92	S 23 5 E	0.10	3489.28	594.6	161.6	564.27 S	187.54 E
3580.00	12.41	156.77	S 23 14 E	0.09	3494.16	595.7	161.6	565.26 S	187.96 E
3585.00	12.28	156.49	S 23 31 E	0.15	3499.04	596.8	161.6	566.24 S	188.39 E
3590.00	12.12	156.19	S 23 49 E	0.17	3503.93	597.8	161.6	567.21 S	188.81 E
3595.00	11.99	155.97	S 24 2 E	0.14	3508.82	598.8	161.6	568.16 S	189.23 E
3600.00	11.89	155.88	S 24 7 E	0.10	3513.71	599.9	161.6	569.11 S	189.66 E
3605.00	11.81	155.87	S 24 8 E	0.08	3518.60	600.9	161.6	570.04 S	190.08 E
3610.00	11.74	155.89	S 24 7 E	0.07	3523.50	601.9	161.5	570.97 S	190.49 E
3615.00	11.71	155.93	S 24 4 E	0.04	3528.40	602.9	161.5	571.90 S	190.91 E
3620.00	11.68	155.95	S 24 3 E	0.03	3533.29	603.9	161.5	572.83 S	191.32 E
3625.00	11.64	156.05	S 23 57 E	0.04	3538.19	604.9	161.5	573.75 S	191.73 E
3630.00	11.62	156.19	S 23 48 E	0.03	3543.09	605.9	161.5	574.67 S	192.14 E
3635.00	11.59	156.30	S 23 42 E	0.04	3547.98	606.9	161.5	575.59 S	192.55 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
3640.00	11.53	156.36	S 23 39 E	0.06	3552.88	607.9	161.5	576.51 S	192.95 E
3645.00	11.47	156.53	S 23 28 E	0.07	3557.78	608.9	161.5	577.42 S	193.35 E
3650.00	11.44	156.62	S 23 23 E	0.04	3562.68	609.9	161.5	578.34 S	193.74 E
3655.00	11.43	156.69	S 23 18 E	0.02	3567.58	610.9	161.5	579.25 S	194.13 E
3660.00	11.41	156.75	S 23 15 E	0.02	3572.48	611.9	161.5	580.15 S	194.52 E
3665.00	11.40	156.84	S 23 9 E	0.02	3577.38	612.9	161.5	581.06 S	194.91 E
3670.00	11.39	156.90	S 23 6 E	0.01	3582.29	613.9	161.4	581.97 S	195.30 E
3675.00	11.38	156.93	S 23 4 E	0.01	3587.19	614.9	161.4	582.88 S	195.69 E
3680.00	11.37	157.00	S 23 0 E	0.02	3592.09	615.8	161.4	583.79 S	196.08 E
3685.00	11.30	156.98	S 23 1 E	0.06	3596.99	616.8	161.4	584.69 S	196.46 E
3690.00	11.23	156.98	S 23 1 E	0.07	3601.90	617.8	161.4	585.59 S	196.84 E
3695.00	11.18	157.01	S 22 59 E	0.05	3606.80	618.8	161.4	586.49 S	197.22 E
3700.00	11.14	157.05	S 22 57 E	0.04	3611.71	619.7	161.4	587.38 S	197.60 E
3705.00	11.07	157.09	S 22 55 E	0.06	3616.61	620.7	161.4	588.26 S	197.97 E
3710.00	11.02	157.07	S 22 56 E	0.06	3621.52	621.6	161.4	589.15 S	198.35 E
3715.00	10.93	157.06	S 22 56 E	0.09	3626.43	622.6	161.4	590.02 S	198.72 E
3720.00	10.75	156.90	S 23 6 E	0.18	3631.34	623.5	161.4	590.89 S	199.09 E
3725.00	10.51	156.59	S 23 24 E	0.25	3636.25	624.4	161.4	591.73 S	199.45 E
3730.00	10.29	156.26	S 23 44 E	0.23	3641.17	625.3	161.4	592.56 S	199.81 E
3735.00	10.16	156.11	S 23 53 E	0.14	3646.09	626.2	161.4	593.37 S	200.17 E
3740.00	10.05	155.91	S 24 6 E	0.11	3651.01	627.1	161.4	594.18 S	200.53 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
3745.00	9.97	155.60	S 24 24 E	0.10	3655.94	628.0	161.3	594.97 S	200.88 E
3750.00	9.90	155.28	S 24 43 E	0.09	3660.86	628.8	161.3	595.75 S	201.24 E
3755.00	9.84	155.05	S 24 57 E	0.07	3665.79	629.7	161.3	596.53 S	201.60 E
3760.00	9.78	154.71	S 25 18 E	0.08	3670.72	630.5	161.3	597.30 S	201.96 E
3765.00	9.69	154.35	S 25 39 E	0.11	3675.64	631.4	161.3	598.07 S	202.33 E
3770.00	9.60	154.13	S 25 52 E	0.11	3680.57	632.2	161.3	598.82 S	202.69 E
3775.00	9.54	153.97	S 26 2 E	0.07	3685.50	633.0	161.3	599.57 S	203.05 E
3780.00	9.52	153.82	S 26 11 E	0.03	3690.43	633.8	161.3	600.31 S	203.42 E
3785.00	9.53	153.81	S 26 11 E	0.00	3695.37	634.7	161.3	601.05 S	203.78 E
3790.00	9.53	153.84	S 26 9 E	0.01	3700.30	635.5	161.3	601.80 S	204.15 E
3795.00	9.53	153.88	S 26 7 E	0.01	3705.23	636.3	161.3	602.54 S	204.51 E
3800.00	9.53	153.85	S 26 9 E	0.01	3710.16	637.1	161.2	603.28 S	204.88 E
3805.00	9.54	153.83	S 26 10 E	0.01	3715.09	637.9	161.2	604.03 S	205.24 E
3810.00	9.57	153.89	S 26 7 E	0.04	3720.02	638.8	161.2	604.77 S	205.61 E
3815.00	9.61	154.03	S 25 58 E	0.05	3724.95	639.6	161.2	605.52 S	205.97 E
3820.00	9.67	154.35	S 25 39 E	0.08	3729.88	640.4	161.2	606.27 S	206.34 E
3825.00	9.78	154.89	S 25 7 E	0.14	3734.81	641.3	161.2	607.04 S	206.70 E
3830.00	9.93	155.59	S 24 25 E	0.19	3739.73	642.1	161.2	607.81 S	207.06 E
3835.00	10.04	156.14	S 23 51 E	0.15	3744.66	643.0	161.2	608.61 S	207.41 E
3840.00	10.08	156.38	S 23 37 E	0.06	3749.58	643.8	161.2	609.41 S	207.77 E
3845.00	10.11	156.46	S 23 32 E	0.03	3754.50	644.7	161.2	610.21 S	208.12 E
3850.00	10.13	156.51	S 23 29 E	0.03	3759.43	645.6	161.2	611.01 S	208.47 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
3855.00	10.15	156.52	S 23 29 E	0.01	3764.35	646.5	161.2	611.82 S	208.82 E
3860.00	10.16	156.58	S 23 25 E	0.02	3769.27	647.4	161.1	612.63 S	209.17 E
3865.00	10.18	156.68	S 23 19 E	0.02	3774.19	648.2	161.1	613.44 S	209.52 E
3870.00	10.21	157.04	S 22 58 E	0.07	3779.11	649.1	161.1	614.25 S	209.87 E
3875.00	10.27	157.52	S 22 29 E	0.10	3784.03	650.0	161.1	615.07 S	210.21 E
3880.00	10.32	157.95	S 22 3 E	0.10	3788.95	650.9	161.1	615.90 S	210.55 E
3885.00	10.35	158.22	S 21 47 E	0.06	3793.87	651.8	161.1	616.73 S	210.88 E
3890.00	10.35	158.40	S 21 36 E	0.03	3798.79	652.7	161.1	617.57 S	211.21 E
3895.00	10.35	158.41	S 21 35 E	0.01	3803.71	653.6	161.1	618.40 S	211.55 E
3900.00	10.36	158.37	S 21 38 E	0.02	3808.63	654.5	161.1	619.24 S	211.88 E
3905.00	10.39	158.39	S 21 37 E	0.03	3813.54	655.4	161.1	620.08 S	212.21 E
3910.00	10.45	158.52	S 21 29 E	0.07	3818.46	656.3	161.1	620.92 S	212.54 E
3915.00	10.54	158.77	S 21 14 E	0.10	3823.38	657.2	161.1	621.77 S	212.87 E
3920.00	10.58	159.01	S 20 59 E	0.06	3828.29	658.1	161.1	622.62 S	213.20 E
3925.00	10.64	159.10	S 20 54 E	0.06	3833.21	659.0	161.1	623.48 S	213.53 E
3930.00	10.73	159.02	S 20 59 E	0.09	3838.12	660.0	161.1	624.35 S	213.86 E
3935.00	10.77	159.06	S 20 57 E	0.04	3843.03	660.9	161.1	625.22 S	214.20 E
3940.00	10.78	159.25	S 20 45 E	0.04	3847.95	661.8	161.1	626.09 S	214.53 E
3945.00	10.81	159.19	S 20 49 E	0.03	3852.86	662.8	161.1	626.97 S	214.86 E
3950.00	10.84	159.20	S 20 48 E	0.03	3857.77	663.7	161.1	627.84 S	215.19 E
3955.00	10.86	159.23	S 20 46 E	0.02	3862.68	664.6	161.1	628.72 S	215.53 E
3960.00	10.89	159.38	S 20 37 E	0.04	3867.59	665.6	161.1	629.61 S	215.86 E

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API Well Number: 4304752316000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
3965.00	10.98	159.68	S 20 19 E	0.11	3872.50	666.5	161.1	630.49 S	216.19 E
3970.00	11.20	160.34	S 19 40 E	0.25	3877.41	667.5	161.1	631.40 S	216.52 E
3975.00	11.46	161.23	S 18 46 E	0.32	3882.31	668.5	161.1	632.33 S	216.85 E
3980.00	11.64	161.91	S 18 6 E	0.23	3887.21	669.5	161.1	633.28 S	217.16 E
3985.00	11.80	162.42	S 17 35 E	0.19	3892.10	670.5	161.1	634.24 S	217.47 E
3990.00	12.04	163.09	S 16 55 E	0.28	3896.99	671.5	161.1	635.23 S	217.78 E
3995.00	12.29	163.73	S 16 16 E	0.28	3901.88	672.6	161.1	636.24 S	218.08 E
4000.00	12.46	164.27	S 15 44 E	0.21	3906.77	673.6	161.1	637.27 S	218.38 E
4005.00	12.58	164.56	S 15 26 E	0.13	3911.65	674.7	161.1	638.31 S	218.67 E
4010.00	12.64	164.78	S 15 13 E	0.08	3916.53	675.8	161.1	639.37 S	218.96 E
4015.00	12.67	164.81	S 15 11 E	0.02	3921.41	676.9	161.1	640.42 S	219.24 E
4020.00	12.69	164.84	S 15 10 E	0.02	3926.28	678.0	161.1	641.48 S	219.53 E
4025.00	12.71	164.84	S 15 9 E	0.02	3931.16	679.1	161.1	642.54 S	219.82 E
4030.00	12.72	164.88	S 15 7 E	0.01	3936.04	680.2	161.1	643.60 S	220.10 E
4035.00	12.74	164.95	S 15 3 E	0.02	3940.92	681.3	161.1	644.67 S	220.39 E
4040.00	12.75	165.01	S 15 0 E	0.02	3945.79	682.4	161.1	645.73 S	220.68 E
4045.00	12.75	165.09	S 14 55 E	0.02	3950.67	683.5	161.1	646.80 S	220.96 E
4050.00	12.74	165.09	S 14 55 E	0.01	3955.55	684.6	161.1	647.87 S	221.25 E
4055.00	12.76	164.97	S 15 2 E	0.04	3960.42	685.7	161.2	648.93 S	221.53 E
4060.00	12.77	164.95	S 15 3 E	0.01	3965.30	686.8	161.2	650.00 S	221.82 E
4065.00	12.77	164.94	S 15 4 E	0.00	3970.18	687.9	161.2	651.07 S	222.10 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
4070.00	12.78	164.96	S 15 3 E	0.01	3975.05	689.0	161.2	652.13 S	222.39 E
4075.00	12.79	164.99	S 15 1 E	0.01	3979.93	690.1	161.2	653.20 S	222.68 E
4080.00	12.79	164.92	S 15 5 E	0.01	3984.80	691.2	161.2	654.27 S	222.97 E
4085.00	12.83	164.81	S 15 11 E	0.04	3989.68	692.3	161.2	655.34 S	223.26 E
4090.00	12.84	164.89	S 15 7 E	0.02	3994.55	693.4	161.2	656.41 S	223.55 E
4095.00	12.75	164.96	S 15 2 E	0.09	3999.43	694.5	161.2	657.48 S	223.83 E
4100.00	12.65	164.90	S 15 6 E	0.10	4004.31	695.6	161.2	658.55 S	224.12 E
4105.00	12.64	164.77	S 15 14 E	0.03	4009.19	696.7	161.2	659.60 S	224.41 E
4110.00	12.65	164.77	S 15 14 E	0.01	4014.06	697.8	161.2	660.66 S	224.69 E
4115.00	12.65	164.77	S 15 14 E	0.00	4018.94	698.9	161.2	661.71 S	224.98 E
4120.00	12.64	164.74	S 15 16 E	0.01	4023.82	700.0	161.2	662.77 S	225.27 E
4125.00	12.61	164.68	S 15 19 E	0.03	4028.70	701.1	161.2	663.82 S	225.56 E
4130.00	12.59	164.61	S 15 24 E	0.03	4033.58	702.2	161.2	664.88 S	225.85 E
4135.00	12.56	164.56	S 15 26 E	0.03	4038.46	703.3	161.2	665.92 S	226.14 E
4140.00	12.52	164.52	S 15 29 E	0.03	4043.34	704.4	161.2	666.97 S	226.42 E
4145.00	12.50	164.40	S 15 36 E	0.04	4048.22	705.4	161.3	668.01 S	226.71 E
4150.00	12.51	164.41	S 15 35 E	0.01	4053.10	706.5	161.3	669.06 S	227.01 E
4155.00	12.50	164.37	S 15 38 E	0.01	4057.99	707.6	161.3	670.10 S	227.30 E
4160.00	12.47	164.29	S 15 43 E	0.03	4062.87	708.7	161.3	671.14 S	227.59 E
4165.00	12.44	164.18	S 15 49 E	0.04	4067.75	709.8	161.3	672.18 S	227.88 E
4170.00	12.36	163.96	S 16 3 E	0.10	4072.63	710.8	161.3	673.21 S	228.18 E
4175.00	12.27	163.70	S 16 18 E	0.11	4077.52	711.9	161.3	674.24 S	228.47 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
4180.00	12.24	163.47	S 16 32 E	0.06	4082.40	713.0	161.3	675.25 S	228.77 E
4185.00	12.23	163.25	S 16 45 E	0.05	4087.29	714.0	161.3	676.27 S	229.08 E
4190.00	12.20	163.14	S 16 52 E	0.04	4092.18	715.1	161.3	677.28 S	229.38 E
4195.00	12.17	162.96	S 17 3 E	0.05	4097.07	716.1	161.3	678.29 S	229.69 E
4200.00	12.15	162.80	S 17 12 E	0.04	4101.95	717.2	161.3	679.30 S	230.00 E
4205.00	12.13	162.61	S 17 23 E	0.05	4106.84	718.2	161.3	680.30 S	230.31 E
4210.00	12.12	162.40	S 17 36 E	0.05	4111.73	719.3	161.3	681.30 S	230.63 E
4215.00	12.16	162.43	S 17 34 E	0.04	4116.62	720.3	161.3	682.30 S	230.95 E
4220.00	12.16	162.53	S 17 28 E	0.02	4121.51	721.4	161.3	683.31 S	231.26 E
4225.00	12.16	162.61	S 17 23 E	0.02	4126.39	722.4	161.3	684.31 S	231.58 E
4230.00	12.17	162.65	S 17 21 E	0.01	4131.28	723.5	161.3	685.32 S	231.89 E
4235.00	12.19	162.65	S 17 21 E	0.01	4136.17	724.5	161.3	686.33 S	232.21 E
4240.00	12.20	162.61	S 17 23 E	0.02	4141.06	725.6	161.3	687.33 S	232.52 E
4245.00	12.24	162.44	S 17 34 E	0.05	4145.94	726.7	161.3	688.34 S	232.84 E
4250.00	12.30	162.22	S 17 47 E	0.08	4150.83	727.7	161.3	689.36 S	233.16 E
4255.00	12.33	162.21	S 17 47 E	0.03	4155.71	728.8	161.3	690.37 S	233.49 E
4260.00	12.31	162.31	S 17 41 E	0.03	4160.60	729.9	161.3	691.39 S	233.81 E
4265.00	12.32	162.30	S 17 42 E	0.01	4165.48	730.9	161.3	692.40 S	234.14 E
4270.00	12.36	162.25	S 17 45 E	0.04	4170.37	732.0	161.3	693.42 S	234.46 E
4275.00	12.35	162.23	S 17 46 E	0.01	4175.25	733.1	161.3	694.44 S	234.79 E
4280.00	12.37	162.22	S 17 47 E	0.02	4180.14	734.1	161.3	695.46 S	235.12 E
4285.00	12.43	162.32	S 17 41 E	0.06	4185.02	735.2	161.3	696.48 S	235.44 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
4290.00	12.54	162.57	S 17 26 E	0.12	4189.90	736.3	161.3	697.51 S	235.77 E
4295.00	12.63	162.77	S 17 14 E	0.10	4194.78	737.4	161.3	698.55 S	236.09 E
4300.00	12.66	162.78	S 17 13 E	0.03	4199.66	738.5	161.3	699.60 S	236.42 E
4305.00	12.67	162.84	S 17 10 E	0.02	4204.54	739.6	161.3	700.65 S	236.74 E
4310.00	12.69	162.94	S 17 4 E	0.03	4209.42	740.7	161.3	701.69 S	237.07 E
4315.00	12.70	162.96	S 17 3 E	0.01	4214.29	741.8	161.3	702.75 S	237.39 E
4320.00	12.73	163.03	S 16 58 E	0.03	4219.17	742.9	161.3	703.80 S	237.71 E
4325.00	12.76	163.17	S 16 50 E	0.04	4224.05	744.0	161.3	704.85 S	238.03 E
4330.00	12.80	163.57	S 16 26 E	0.10	4228.92	745.1	161.3	705.91 S	238.35 E
4335.00	12.89	164.30	S 15 42 E	0.18	4233.80	746.2	161.3	706.98 S	238.65 E
4340.00	12.97	164.94	S 15 3 E	0.17	4238.67	747.3	161.4	708.06 S	238.95 E
4345.00	13.05	165.33	S 14 40 E	0.11	4243.54	748.4	161.4	709.15 S	239.24 E
4350.00	13.07	165.49	S 14 31 E	0.04	4248.41	749.5	161.4	710.24 S	239.52 E
4355.00	13.07	165.55	S 14 27 E	0.02	4253.28	750.7	161.4	711.34 S	239.81 E
4360.00	13.07	165.53	S 14 28 E	0.01	4258.16	751.8	161.4	712.43 S	240.09 E
4365.00	13.08	165.49	S 14 31 E	0.01	4263.03	752.9	161.4	713.53 S	240.37 E
4370.00	13.10	165.45	S 14 33 E	0.02	4267.90	754.1	161.4	714.62 S	240.66 E
4375.00	13.12	165.43	S 14 34 E	0.03	4272.77	755.2	161.4	715.72 S	240.94 E
4380.00	13.14	165.44	S 14 33 E	0.01	4277.63	756.3	161.4	716.82 S	241.23 E
4385.00	13.13	165.57	S 14 26 E	0.03	4282.50	757.5	161.4	717.92 S	241.51 E
4390.00	13.11	165.64	S 14 21 E	0.02	4287.37	758.6	161.4	719.02 S	241.79 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
4395.00	13.12	165.53	S 14 28 E	0.03	4292.24	759.7	161.4	720.12 S	242.08 E
4400.00	13.15	165.50	S 14 30 E	0.04	4297.11	760.9	161.4	721.22 S	242.36 E
4405.00	13.15	165.50	S 14 30 E	0.00	4301.98	762.0	161.4	722.32 S	242.65 E
4410.00	13.13	165.48	S 14 31 E	0.02	4306.85	763.1	161.4	723.42 S	242.93 E
4415.00	13.13	165.49	S 14 31 E	0.01	4311.72	764.3	161.4	724.52 S	243.22 E
4420.00	13.11	165.39	S 14 37 E	0.02	4316.59	765.4	161.4	725.62 S	243.50 E
4425.00	13.09	165.29	S 14 42 E	0.03	4321.46	766.5	161.5	726.71 S	243.79 E
4430.00	13.06	165.19	S 14 49 E	0.04	4326.33	767.6	161.5	727.81 S	244.08 E
4435.00	13.01	165.14	S 14 51 E	0.04	4331.20	768.8	161.5	728.90 S	244.36 E
4440.00	13.01	165.15	S 14 51 E	0.00	4336.07	769.9	161.5	729.99 S	244.65 E
4445.00	13.00	165.08	S 14 55 E	0.02	4340.94	771.0	161.5	731.07 S	244.94 E
4450.00	13.00	165.04	S 14 57 E	0.01	4345.82	772.1	161.5	732.16 S	245.23 E
4455.00	13.01	165.05	S 14 57 E	0.01	4350.69	773.3	161.5	733.25 S	245.52 E
4460.00	13.00	165.06	S 14 56 E	0.01	4355.56	774.4	161.5	734.34 S	245.81 E
4465.00	12.95	164.90	S 15 6 E	0.06	4360.43	775.5	161.5	735.42 S	246.10 E
4470.00	12.92	164.83	S 15 10 E	0.04	4365.30	776.6	161.5	736.50 S	246.40 E
4475.00	12.89	164.80	S 15 12 E	0.03	4370.18	777.7	161.5	737.58 S	246.69 E
4480.00	12.82	164.63	S 15 22 E	0.08	4375.05	778.8	161.5	738.65 S	246.98 E
4485.00	12.73	164.35	S 15 39 E	0.10	4379.93	780.0	161.5	739.72 S	247.28 E
4490.00	12.68	164.17	S 15 50 E	0.06	4384.81	781.1	161.5	740.77 S	247.58 E
4495.00	12.66	164.10	S 15 54 E	0.03	4389.68	782.1	161.5	741.83 S	247.87 E
4500.00	12.67	164.12	S 15 53 E	0.01	4394.56	783.2	161.5	742.88 S	248.17 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
4505.00	12.69	164.22	S 15 47 E	0.03	4399.44	784.3	161.5	743.94 S	248.47 E
4510.00	12.68	164.22	S 15 47 E	0.01	4404.32	785.4	161.5	745.00 S	248.77 E
4515.00	12.67	164.10	S 15 54 E	0.03	4409.20	786.5	161.5	746.05 S	249.07 E
4520.00	12.68	164.01	S 16 0 E	0.02	4414.08	787.6	161.5	747.11 S	249.37 E
4525.00	12.68	164.00	S 16 0 E	0.00	4418.95	788.7	161.5	748.16 S	249.68 E
4530.00	12.68	163.99	S 16 0 E	0.00	4423.83	789.8	161.5	749.22 S	249.98 E
4535.00	12.67	163.99	S 16 1 E	0.01	4428.71	790.9	161.6	750.27 S	250.28 E
4540.00	12.65	163.90	S 16 6 E	0.03	4433.59	792.0	161.6	751.32 S	250.58 E
4545.00	12.58	163.77	S 16 14 E	0.07	4438.47	793.1	161.6	752.37 S	250.89 E
4550.00	12.44	163.51	S 16 29 E	0.15	4443.35	794.2	161.6	753.41 S	251.19 E
4555.00	12.25	163.24	S 16 46 E	0.20	4448.23	795.3	161.6	754.44 S	251.50 E
4560.00	12.12	163.15	S 16 51 E	0.13	4453.12	796.3	161.6	755.45 S	251.80 E
4565.00	12.04	163.04	S 16 57 E	0.08	4458.01	797.4	161.6	756.45 S	252.11 E
4570.00	11.98	163.00	S 17 0 E	0.06	4462.90	798.4	161.6	757.44 S	252.41 E
4575.00	11.91	162.88	S 17 7 E	0.08	4467.79	799.4	161.6	758.43 S	252.72 E
4580.00	11.84	162.73	S 17 16 E	0.07	4472.69	800.5	161.6	759.41 S	253.02 E
4585.00	11.77	162.54	S 17 28 E	0.08	4477.58	801.5	161.6	760.39 S	253.33 E
4590.00	11.63	162.18	S 17 49 E	0.16	4482.48	802.5	161.6	761.36 S	253.63 E
4595.00	11.49	161.99	S 18 1 E	0.15	4487.37	803.5	161.6	762.31 S	253.94 E
4600.00	11.38	161.96	S 18 3 E	0.10	4492.27	804.5	161.6	763.25 S	254.25 E
4605.00	11.33	161.83	S 18 11 E	0.06	4497.18	805.5	161.6	764.19 S	254.55 E
4610.00	11.34	161.74	S 18 16 E	0.02	4502.08	806.5	161.6	765.12 S	254.86 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
4615.00	11.35	161.74	S 18 16 E	0.01	4506.98	807.4	161.6	766.06 S	255.17 E
4620.00	11.36	161.80	S 18 12 E	0.02	4511.88	808.4	161.6	766.99 S	255.48 E
4625.00	11.39	161.89	S 18 7 E	0.03	4516.79	809.4	161.6	767.93 S	255.78 E
4630.00	11.43	162.14	S 17 51 E	0.07	4521.69	810.4	161.6	768.87 S	256.09 E
4635.00	11.50	162.56	S 17 26 E	0.11	4526.59	811.4	161.6	769.82 S	256.39 E
4640.00	11.59	163.11	S 16 53 E	0.14	4531.49	812.4	161.6	770.77 S	256.69 E
4645.00	11.68	163.72	S 16 17 E	0.15	4536.38	813.4	161.6	771.74 S	256.97 E
4650.00	11.74	164.16	S 15 50 E	0.11	4541.28	814.4	161.6	772.71 S	257.25 E
4655.00	11.77	164.37	S 15 38 E	0.05	4546.17	815.4	161.6	773.69 S	257.53 E
4660.00	11.79	164.47	S 15 32 E	0.03	4551.07	816.4	161.6	774.68 S	257.80 E
4665.00	11.81	164.66	S 15 21 E	0.05	4555.96	817.5	161.6	775.66 S	258.08 E
4670.00	11.89	165.15	S 14 51 E	0.13	4560.86	818.5	161.6	776.65 S	258.34 E
4675.00	12.01	166.02	S 13 59 E	0.22	4565.75	819.5	161.6	777.66 S	258.60 E
4680.00	12.13	166.93	S 13 4 E	0.23	4570.64	820.6	161.6	778.67 S	258.85 E
4685.00	12.21	167.48	S 12 31 E	0.14	4575.53	821.6	161.6	779.70 S	259.08 E
4690.00	12.25	167.68	S 12 19 E	0.06	4580.41	822.7	161.6	780.74 S	259.31 E
4695.00	12.26	167.68	S 12 19 E	0.02	4585.30	823.7	161.6	781.77 S	259.53 E
4700.00	12.27	167.68	S 12 19 E	0.00	4590.18	824.8	161.6	782.81 S	259.76 E
4705.00	12.28	167.70	S 12 18 E	0.01	4595.07	825.8	161.7	783.85 S	259.99 E
4710.00	12.29	167.71	S 12 18 E	0.01	4599.96	826.9	161.7	784.89 S	260.21 E
4715.00	12.31	167.73	S 12 16 E	0.01	4604.84	828.0	161.7	785.93 S	260.44 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
4720.00	12.25	167.80	S 12 12 E	0.06	4609.73	829.0	161.7	786.97 S	260.67 E
4725.00	12.21	167.84	S 12 9 E	0.05	4614.61	830.1	161.7	788.00 S	260.89 E
4730.00	12.19	167.76	S 12 14 E	0.03	4619.50	831.1	161.7	789.04 S	261.11 E
4735.00	12.14	167.72	S 12 17 E	0.05	4624.39	832.2	161.7	790.06 S	261.34 E
4740.00	12.07	167.61	S 12 23 E	0.07	4629.28	833.2	161.7	791.09 S	261.56 E
4745.00	11.99	167.41	S 12 36 E	0.09	4634.17	834.2	161.7	792.11 S	261.79 E
4750.00	11.93	167.16	S 12 50 E	0.08	4639.06	835.3	161.7	793.12 S	262.01 E
4755.00	11.93	167.00	S 13 0 E	0.03	4643.95	836.3	161.7	794.12 S	262.24 E
4760.00	11.94	166.97	S 13 2 E	0.01	4648.84	837.3	161.7	795.13 S	262.48 E
4765.00	11.94	166.97	S 13 2 E	0.00	4653.73	838.4	161.7	796.14 S	262.71 E
4770.00	11.94	166.97	S 13 2 E	0.00	4658.63	839.4	161.7	797.15 S	262.94 E
4775.00	11.95	166.98	S 13 1 E	0.01	4663.52	840.4	161.8	798.15 S	263.18 E
4780.00	11.96	166.95	S 13 3 E	0.02	4668.41	841.5	161.8	799.16 S	263.41 E
4785.00	11.97	166.94	S 13 4 E	0.01	4673.30	842.5	161.8	800.17 S	263.64 E
4790.00	11.97	166.89	S 13 6 E	0.01	4678.19	843.5	161.8	801.18 S	263.88 E
4795.00	11.95	166.75	S 13 15 E	0.04	4683.08	844.6	161.8	802.19 S	264.12 E
4800.00	11.89	166.49	S 13 31 E	0.08	4687.98	845.6	161.8	803.20 S	264.35 E
4805.00	11.82	166.16	S 13 51 E	0.09	4692.87	846.6	161.8	804.19 S	264.60 E
4810.00	11.83	165.85	S 14 9 E	0.06	4697.76	847.6	161.8	805.19 S	264.85 E
4815.00	11.84	165.77	S 14 14 E	0.02	4702.66	848.7	161.8	806.18 S	265.10 E
4820.00	11.85	165.78	S 14 13 E	0.01	4707.55	849.7	161.8	807.18 S	265.35 E
4825.00	11.86	165.77	S 14 14 E	0.01	4712.44	850.7	161.8	808.17 S	265.60 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
4830.00	11.86	165.71	S 14 17 E	0.01	4717.34	851.7	161.8	809.17 S	265.85 E
4835.00	11.89	165.43	S 14 34 E	0.07	4722.23	852.8	161.8	810.17 S	266.11 E
4840.00	11.93	164.94	S 15 3 E	0.11	4727.12	853.8	161.8	811.16 S	266.37 E
4845.00	11.95	164.54	S 15 27 E	0.09	4732.01	854.8	161.8	812.16 S	266.65 E
4850.00	11.98	164.29	S 15 43 E	0.06	4736.91	855.8	161.8	813.16 S	266.93 E
4855.00	12.01	164.19	S 15 49 E	0.04	4741.80	856.9	161.8	814.16 S	267.21 E
4860.00	12.07	164.17	S 15 50 E	0.05	4746.69	857.9	161.8	815.16 S	267.49 E
4865.00	12.13	164.20	S 15 48 E	0.06	4751.58	859.0	161.8	816.17 S	267.78 E
4870.00	12.18	164.20	S 15 48 E	0.05	4756.46	860.0	161.8	817.19 S	268.06 E
4875.00	12.23	164.17	S 15 50 E	0.05	4761.35	861.1	161.8	818.20 S	268.35 E
4880.00	12.25	164.20	S 15 48 E	0.02	4766.24	862.1	161.8	819.22 S	268.64 E
4885.00	12.25	164.21	S 15 48 E	0.01	4771.12	863.2	161.8	820.24 S	268.93 E
4890.00	12.26	164.24	S 15 46 E	0.01	4776.01	864.3	161.9	821.26 S	269.22 E
4895.00	12.26	164.23	S 15 46 E	0.00	4780.89	865.3	161.9	822.29 S	269.51 E
4900.00	12.25	164.21	S 15 47 E	0.01	4785.78	866.4	161.9	823.31 S	269.80 E
4905.00	12.24	164.10	S 15 54 E	0.02	4790.67	867.4	161.9	824.33 S	270.09 E
4910.00	12.22	164.00	S 16 0 E	0.04	4795.55	868.5	161.9	825.35 S	270.38 E
4915.00	12.18	163.89	S 16 7 E	0.04	4800.44	869.6	161.9	826.36 S	270.67 E
4920.00	12.17	163.75	S 16 15 E	0.03	4805.33	870.6	161.9	827.37 S	270.96 E
4925.00	12.11	163.57	S 16 26 E	0.07	4810.22	871.7	161.9	828.38 S	271.26 E
4930.00	11.99	163.34	S 16 39 E	0.13	4815.11	872.7	161.9	829.38 S	271.56 E
4935.00	11.92	163.13	S 16 52 E	0.08	4820.00	873.7	161.9	830.38 S	271.85 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
4940.00	11.89	162.99	S 17 0 E	0.04	4824.89	874.8	161.9	831.36 S	272.15 E
4945.00	11.89	162.91	S 17 5 E	0.02	4829.78	875.8	161.9	832.35 S	272.46 E
4950.00	11.90	162.87	S 17 8 E	0.01	4834.68	876.8	161.9	833.33 S	272.76 E
4955.00	11.89	162.82	S 17 11 E	0.01	4839.57	877.9	161.9	834.32 S	273.06 E
4960.00	11.82	162.81	S 17 11 E	0.07	4844.46	878.9	161.9	835.30 S	273.37 E
4965.00	11.71	162.58	S 17 25 E	0.12	4849.36	879.9	161.9	836.27 S	273.67 E
4970.00	11.55	162.15	S 17 51 E	0.18	4854.25	880.9	161.9	837.23 S	273.98 E
4975.00	11.44	161.85	S 18 9 E	0.13	4859.15	881.9	161.9	838.18 S	274.28 E
4980.00	11.36	161.68	S 18 19 E	0.08	4864.05	882.9	161.9	839.12 S	274.59 E
4985.00	11.32	161.55	S 18 27 E	0.05	4868.96	883.9	161.9	840.05 S	274.90 E
4990.00	11.30	161.50	S 18 30 E	0.03	4873.86	884.9	161.9	840.98 S	275.21 E
4995.00	11.24	161.46	S 18 33 E	0.05	4878.76	885.8	161.9	841.91 S	275.52 E
5000.00	11.14	161.37	S 18 38 E	0.10	4883.67	886.8	161.9	842.83 S	275.83 E
5005.00	10.91	161.14	S 18 52 E	0.23	4888.58	887.8	161.9	843.73 S	276.14 E
5010.00	10.67	160.86	S 19 8 E	0.25	4893.49	888.7	161.9	844.62 S	276.45 E
5015.00	10.54	160.80	S 19 12 E	0.13	4898.40	889.6	161.9	845.49 S	276.75 E
5020.00	10.46	160.79	S 19 13 E	0.09	4903.32	890.5	161.9	846.35 S	277.05 E
5025.00	10.38	160.81	S 19 11 E	0.07	4908.24	891.4	161.9	847.20 S	277.34 E
5030.00	10.27	160.87	S 19 8 E	0.11	4913.16	892.3	161.9	848.05 S	277.64 E
5035.00	10.08	161.03	S 18 58 E	0.20	4918.08	893.2	161.9	848.88 S	277.93 E
5040.00	9.84	161.39	S 18 37 E	0.24	4923.00	894.1	161.9	849.70 S	278.21 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
5045.00	9.68	161.74	S 18 15 E	0.18	4927.93	894.9	161.9	850.51 S	278.47 E
5050.00	9.57	161.91	S 18 5 E	0.12	4932.86	895.8	161.9	851.30 S	278.73 E
5055.00	9.49	162.15	S 17 51 E	0.08	4937.79	896.6	161.9	852.09 S	278.99 E
5060.00	9.43	162.44	S 17 33 E	0.08	4942.72	897.4	161.9	852.87 S	279.24 E
5065.00	9.40	162.67	S 17 20 E	0.05	4947.65	898.2	161.9	853.65 S	279.49 E
5070.00	9.39	162.97	S 17 2 E	0.05	4952.59	899.1	161.9	854.43 S	279.73 E
5075.00	9.36	163.75	S 16 15 E	0.13	4957.52	899.9	161.9	855.21 S	279.96 E
5080.00	9.31	164.73	S 15 16 E	0.17	4962.45	900.7	161.9	855.99 S	280.18 E
5085.00	9.28	165.48	S 14 31 E	0.13	4967.39	901.5	161.9	856.77 S	280.39 E
5090.00	9.25	166.12	S 13 53 E	0.11	4972.32	902.3	161.9	857.55 S	280.58 E
5095.00	9.24	166.64	S 13 22 E	0.08	4977.26	903.1	161.9	858.33 S	280.77 E
5100.00	9.24	166.73	S 13 16 E	0.02	4982.19	903.9	161.9	859.11 S	280.96 E
5105.00	9.23	166.96	S 13 2 E	0.04	4987.13	904.7	161.9	859.90 S	281.14 E
5110.00	9.25	167.16	S 12 50 E	0.04	4992.06	905.5	161.9	860.68 S	281.32 E
5115.00	9.29	167.53	S 12 28 E	0.07	4997.00	906.3	161.9	861.46 S	281.50 E
5120.00	9.36	168.41	S 11 36 E	0.16	5001.93	907.1	161.9	862.26 S	281.67 E
5125.00	9.46	169.84	S 10 10 E	0.25	5006.87	907.9	161.9	863.06 S	281.82 E
5130.00	9.55	171.04	S 8 58 E	0.22	5011.80	908.7	161.9	863.87 S	281.96 E
5135.00	9.60	171.62	S 8 23 E	0.11	5016.73	909.5	161.9	864.69 S	282.08 E
5140.00	9.63	171.94	S 8 4 E	0.06	5021.66	910.4	161.9	865.52 S	282.20 E
5145.00	9.68	172.16	S 7 50 E	0.06	5026.59	911.2	162.0	866.35 S	282.32 E
5150.00	9.73	172.45	S 7 33 E	0.07	5031.51	912.0	162.0	867.19 S	282.43 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
5155.00	9.77	172.63	S 7 22 E	0.05	5036.44	912.9	162.0	868.03 S	282.54 E
5160.00	9.79	172.81	S 7 12 E	0.04	5041.37	913.7	162.0	868.87 S	282.65 E
5165.00	9.82	173.04	S 6 58 E	0.05	5046.30	914.5	162.0	869.71 S	282.75 E
5170.00	9.88	173.45	S 6 33 E	0.09	5051.22	915.4	162.0	870.56 S	282.85 E
5175.00	9.96	174.01	S 5 59 E	0.13	5056.15	916.2	162.0	871.42 S	282.95 E
5180.00	10.05	174.53	S 5 28 E	0.12	5061.07	917.1	162.0	872.28 S	283.04 E
5185.00	10.10	174.90	S 5 6 E	0.08	5065.99	917.9	162.0	873.15 S	283.12 E
5190.00	10.12	174.99	S 5 0 E	0.03	5070.92	918.8	162.0	874.03 S	283.19 E
5195.00	10.13	175.06	S 4 56 E	0.02	5075.84	919.6	162.1	874.90 S	283.27 E
5200.00	10.16	175.21	S 4 47 E	0.04	5080.76	920.5	162.1	875.78 S	283.34 E
5205.00	10.19	175.36	S 4 39 E	0.04	5085.68	921.3	162.1	876.66 S	283.42 E
5210.00	10.19	175.54	S 4 27 E	0.03	5090.60	922.2	162.1	877.54 S	283.49 E
5215.00	10.18	175.84	S 4 10 E	0.05	5095.52	923.1	162.1	878.42 S	283.55 E
5220.00	10.18	176.07	S 3 56 E	0.04	5100.45	923.9	162.1	879.31 S	283.62 E
5225.00	10.21	176.10	S 3 54 E	0.03	5105.37	924.8	162.1	880.19 S	283.68 E
5230.00	10.22	176.07	S 3 56 E	0.01	5110.29	925.6	162.1	881.07 S	283.74 E
5235.00	10.24	176.04	S 3 58 E	0.02	5115.21	926.5	162.2	881.96 S	283.80 E
5240.00	10.26	176.10	S 3 54 E	0.02	5120.13	927.4	162.2	882.85 S	283.86 E
5245.00	10.31	176.25	S 3 45 E	0.05	5125.05	928.2	162.2	883.74 S	283.92 E
5250.00	10.36	176.38	S 3 37 E	0.05	5129.97	929.1	162.2	884.63 S	283.98 E
5255.00	10.43	176.30	S 3 42 E	0.07	5134.89	930.0	162.2	885.53 S	284.03 E
5260.00	10.48	176.21	S 3 48 E	0.06	5139.80	930.8	162.2	886.44 S	284.09 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
5265.00	10.53	176.26	S 3 45 E	0.05	5144.72	931.7	162.2	887.35 S	284.15 E
5270.00	10.58	176.23	S 3 46 E	0.04	5149.63	932.6	162.3	888.26 S	284.21 E
5275.00	10.61	176.19	S 3 48 E	0.03	5154.55	933.5	162.3	889.18 S	284.27 E
5280.00	10.65	176.08	S 3 55 E	0.04	5159.46	934.4	162.3	890.10 S	284.33 E
5285.00	10.71	175.89	S 4 7 E	0.07	5164.38	935.3	162.3	891.02 S	284.40 E
5290.00	10.82	175.55	S 4 27 E	0.13	5169.29	936.2	162.3	891.95 S	284.47 E
5295.00	11.00	174.85	S 5 9 E	0.22	5174.20	937.1	162.3	892.90 S	284.55 E
5300.00	11.23	173.89	S 6 7 E	0.30	5179.10	938.1	162.3	893.86 S	284.64 E
5305.00	11.42	173.16	S 6 50 E	0.23	5184.01	939.0	162.3	894.83 S	284.75 E
5310.00	11.51	172.81	S 7 12 E	0.12	5188.91	940.0	162.4	895.82 S	284.88 E
5315.00	11.55	172.65	S 7 21 E	0.05	5193.81	941.0	162.4	896.81 S	285.00 E
5320.00	11.57	172.58	S 7 25 E	0.02	5198.70	942.0	162.4	897.80 S	285.13 E
5325.00	11.58	172.46	S 7 33 E	0.03	5203.60	943.0	162.4	898.80 S	285.26 E
5330.00	11.56	172.24	S 7 46 E	0.05	5208.50	944.0	162.4	899.79 S	285.39 E
5335.00	11.52	171.77	S 8 14 E	0.10	5213.40	945.0	162.4	900.78 S	285.53 E
5340.00	11.43	171.02	S 8 59 E	0.17	5218.30	945.9	162.4	901.77 S	285.68 E
5345.00	11.35	170.38	S 9 37 E	0.15	5223.20	946.9	162.4	902.74 S	285.84 E
5350.00	11.33	170.11	S 9 54 E	0.06	5228.10	947.9	162.4	903.71 S	286.01 E
5355.00	11.32	169.92	S 10 5 E	0.04	5233.01	948.9	162.4	904.68 S	286.18 E
5360.00	11.33	169.80	S 10 12 E	0.03	5237.91	949.8	162.5	905.64 S	286.35 E
5365.00	11.35	169.62	S 10 23 E	0.04	5242.81	950.8	162.5	906.61 S	286.53 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
5370.00	11.37	169.38	S 10 37 E	0.05	5247.71	951.8	162.5	907.58 S	286.71 E
5375.00	11.39	169.05	S 10 57 E	0.07	5252.62	952.8	162.5	908.55 S	286.89 E
5380.00	11.41	168.43	S 11 34 E	0.12	5257.52	953.8	162.5	909.52 S	287.08 E
5385.00	11.45	167.63	S 12 22 E	0.16	5262.42	954.7	162.5	910.49 S	287.29 E
5390.00	11.48	167.15	S 12 51 E	0.10	5267.32	955.7	162.5	911.46 S	287.51 E
5395.00	11.51	166.86	S 13 9 E	0.06	5272.22	956.7	162.5	912.43 S	287.73 E
5400.00	11.52	166.70	S 13 18 E	0.04	5277.12	957.7	162.5	913.40 S	287.96 E
5405.00	11.53	166.60	S 13 24 E	0.02	5282.02	958.7	162.5	914.37 S	288.19 E
5410.00	11.53	166.55	S 13 27 E	0.01	5286.92	959.7	162.5	915.34 S	288.42 E
5415.00	11.51	166.49	S 13 30 E	0.02	5291.81	960.7	162.5	916.31 S	288.66 E
5420.00	11.49	166.37	S 13 38 E	0.04	5296.71	961.7	162.5	917.28 S	288.89 E
5425.00	11.48	166.27	S 13 44 E	0.02	5301.61	962.7	162.5	918.25 S	289.12 E
5430.00	11.47	166.16	S 13 51 E	0.02	5306.51	963.7	162.5	919.22 S	289.36 E
5435.00	11.43	166.15	S 13 51 E	0.04	5311.41	964.7	162.5	920.18 S	289.60 E
5440.00	11.40	166.20	S 13 48 E	0.04	5316.32	965.7	162.5	921.14 S	289.84 E
5445.00	11.37	166.27	S 13 44 E	0.03	5321.22	966.6	162.5	922.10 S	290.07 E
5450.00	11.33	166.30	S 13 42 E	0.03	5326.12	967.6	162.5	923.06 S	290.30 E
5455.00	11.33	166.21	S 13 47 E	0.02	5331.02	968.6	162.5	924.01 S	290.54 E
5460.00	11.32	166.15	S 13 51 E	0.02	5335.93	969.6	162.5	924.96 S	290.77 E
5465.00	11.29	166.07	S 13 56 E	0.04	5340.83	970.6	162.6	925.91 S	291.01 E
5470.00	11.22	166.03	S 13 58 E	0.06	5345.73	971.5	162.6	926.86 S	291.24 E
5475.00	11.19	166.01	S 13 59 E	0.03	5350.64	972.5	162.6	927.80 S	291.48 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
5480.00	11.18	166.03	S 13 58 E	0.02	5355.54	973.5	162.6	928.75 S	291.71 E
5485.00	11.19	166.03	S 13 58 E	0.01	5360.45	974.4	162.6	929.69 S	291.95 E
5490.00	11.18	166.04	S 13 58 E	0.01	5365.35	975.4	162.6	930.63 S	292.18 E
5495.00	11.13	166.07	S 13 56 E	0.05	5370.26	976.4	162.6	931.57 S	292.41 E
5500.00	11.02	166.03	S 13 58 E	0.11	5375.16	977.3	162.6	932.50 S	292.64 E
5505.00	10.89	166.07	S 13 56 E	0.13	5380.07	978.3	162.6	933.42 S	292.87 E
5510.00	10.80	166.03	S 13 58 E	0.10	5384.98	979.2	162.6	934.34 S	293.10 E
5515.00	10.75	166.01	S 13 59 E	0.05	5389.90	980.2	162.6	935.24 S	293.33 E
5520.00	10.74	165.96	S 14 2 E	0.01	5394.81	981.1	162.6	936.15 S	293.55 E
5525.00	10.76	165.99	S 14 1 E	0.01	5399.72	982.0	162.6	937.05 S	293.78 E
5530.00	10.74	166.04	S 13 58 E	0.02	5404.63	983.0	162.6	937.96 S	294.00 E
5535.00	10.70	166.10	S 13 54 E	0.04	5409.55	983.9	162.6	938.86 S	294.23 E
5540.00	10.68	166.06	S 13 57 E	0.02	5414.46	984.8	162.6	939.76 S	294.45 E
5545.00	10.65	166.07	S 13 56 E	0.04	5419.37	985.7	162.6	940.66 S	294.67 E
5550.00	10.58	166.10	S 13 54 E	0.07	5424.29	986.7	162.6	941.55 S	294.89 E
5555.00	10.53	166.14	S 13 52 E	0.05	5429.20	987.6	162.6	942.44 S	295.11 E
5560.00	10.48	166.18	S 13 49 E	0.05	5434.12	988.5	162.6	943.33 S	295.33 E
5565.00	10.45	166.29	S 13 43 E	0.04	5439.03	989.4	162.6	944.21 S	295.55 E
5570.00	10.42	166.43	S 13 34 E	0.03	5443.95	990.3	162.6	945.09 S	295.76 E
5575.00	10.43	166.51	S 13 30 E	0.02	5448.87	991.2	162.6	945.97 S	295.97 E
5580.00	10.43	166.66	S 13 20 E	0.03	5453.79	992.1	162.6	946.85 S	296.18 E
5585.00	10.40	166.96	S 13 3 E	0.06	5458.70	993.0	162.6	947.73 S	296.39 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
5590.00	10.35	167.32	S 12 41 E	0.08	5463.62	993.9	162.6	948.61 S	296.59 E
5595.00	10.33	167.61	S 12 23 E	0.06	5468.54	994.8	162.6	949.48 S	296.79 E
5600.00	10.30	167.93	S 12 4 E	0.06	5473.46	995.7	162.6	950.36 S	296.97 E
5605.00	10.29	168.18	S 11 49 E	0.05	5478.38	996.6	162.7	951.23 S	297.16 E
5610.00	10.31	168.21	S 11 47 E	0.02	5483.30	997.5	162.7	952.11 S	297.34 E
5615.00	10.33	168.21	S 11 48 E	0.02	5488.22	998.3	162.7	952.98 S	297.53 E
5620.00	10.32	168.33	S 11 40 E	0.02	5493.14	999.2	162.7	953.86 S	297.71 E
5625.00	10.30	168.44	S 11 34 E	0.03	5498.06	1000.1	162.7	954.74 S	297.89 E
5630.00	10.27	168.49	S 11 31 E	0.03	5502.98	1001.0	162.7	955.61 S	298.07 E
5635.00	10.25	168.49	S 11 31 E	0.02	5507.90	1001.9	162.7	956.48 S	298.24 E
5640.00	10.25	168.51	S 11 29 E	0.00	5512.82	1002.8	162.7	957.35 S	298.42 E
5645.00	10.26	168.49	S 11 31 E	0.01	5517.74	1003.7	162.7	958.23 S	298.60 E
5650.00	10.27	168.50	S 11 30 E	0.01	5522.66	1004.6	162.7	959.10 S	298.78 E
5655.00	10.25	168.52	S 11 29 E	0.01	5527.58	1005.4	162.7	959.97 S	298.95 E
5660.00	10.23	168.41	S 11 35 E	0.03	5532.50	1006.3	162.7	960.84 S	299.13 E
5665.00	10.21	167.92	S 12 5 E	0.09	5537.42	1007.2	162.7	961.71 S	299.31 E
5670.00	10.16	167.27	S 12 44 E	0.13	5542.34	1008.1	162.7	962.58 S	299.50 E
5675.00	10.08	166.73	S 13 16 E	0.12	5547.26	1009.0	162.7	963.43 S	299.70 E
5680.00	10.04	166.38	S 13 37 E	0.07	5552.18	1009.8	162.7	964.28 S	299.90 E
5685.00	10.05	166.21	S 13 47 E	0.03	5557.11	1010.7	162.7	965.13 S	300.11 E
5690.00	10.06	166.11	S 13 53 E	0.02	5562.03	1011.6	162.7	965.98 S	300.32 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
5695.00	10.07	166.03	S 13 58 E	0.02	5566.95	1012.5	162.7	966.83 S	300.53 E
5700.00	10.08	165.68	S 14 19 E	0.06	5571.88	1013.3	162.7	967.67 S	300.74 E
5705.00	10.08	165.34	S 14 40 E	0.06	5576.80	1014.2	162.7	968.52 S	300.96 E
5710.00	10.06	165.12	S 14 53 E	0.04	5581.72	1015.1	162.7	969.37 S	301.19 E
5715.00	10.07	165.04	S 14 57 E	0.01	5586.65	1016.0	162.7	970.21 S	301.41 E
5720.00	10.10	164.74	S 15 15 E	0.06	5591.57	1016.8	162.7	971.06 S	301.64 E
5725.00	10.12	164.40	S 15 36 E	0.06	5596.49	1017.7	162.7	971.90 S	301.87 E
5730.00	10.15	164.01	S 16 0 E	0.07	5601.41	1018.6	162.7	972.75 S	302.11 E
5735.00	10.18	163.65	S 16 21 E	0.07	5606.33	1019.5	162.7	973.60 S	302.36 E
5740.00	10.22	163.10	S 16 54 E	0.10	5611.26	1020.4	162.7	974.45 S	302.61 E
5745.00	10.31	162.33	S 17 40 E	0.16	5616.18	1021.2	162.7	975.30 S	302.88 E
5750.00	10.44	161.41	S 18 36 E	0.22	5621.09	1022.1	162.7	976.15 S	303.16 E
5755.00	10.59	160.54	S 19 28 E	0.21	5626.01	1023.1	162.7	977.01 S	303.45 E
5760.00	10.69	159.97	S 20 2 E	0.15	5630.92	1024.0	162.7	977.88 S	303.77 E
5765.00	10.74	159.62	S 20 23 E	0.08	5635.84	1024.9	162.7	978.75 S	304.09 E
5770.00	10.79	159.42	S 20 35 E	0.07	5640.75	1025.8	162.7	979.63 S	304.41 E
5775.00	10.87	159.22	S 20 47 E	0.08	5645.66	1026.8	162.7	980.51 S	304.75 E
5780.00	10.99	159.03	S 20 58 E	0.13	5650.57	1027.7	162.7	981.39 S	305.08 E
5785.00	11.17	158.79	S 21 13 E	0.18	5655.48	1028.7	162.7	982.29 S	305.43 E
5790.00	11.35	158.59	S 21 24 E	0.18	5660.38	1029.7	162.7	983.20 S	305.78 E
5795.00	11.49	158.48	S 21 31 E	0.14	5665.28	1030.6	162.7	984.12 S	306.15 E
5800.00	11.65	158.48	S 21 31 E	0.15	5670.18	1031.6	162.7	985.06 S	306.51 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
5805.00	11.78	158.44	S 21 33 E	0.13	5675.07	1032.7	162.7	986.00 S	306.89 E
5810.00	11.85	158.44	S 21 34 E	0.07	5679.97	1033.7	162.7	986.95 S	307.26 E
5815.00	11.94	158.39	S 21 37 E	0.08	5684.86	1034.7	162.7	987.91 S	307.64 E
5820.00	12.02	158.39	S 21 37 E	0.08	5689.75	1035.7	162.7	988.88 S	308.02 E
5825.00	12.12	158.38	S 21 37 E	0.10	5694.64	1036.8	162.7	989.85 S	308.41 E
5830.00	12.27	158.32	S 21 41 E	0.15	5699.53	1037.8	162.7	990.83 S	308.80 E
5835.00	12.49	158.35	S 21 39 E	0.22	5704.41	1038.9	162.7	991.82 S	309.20 E
5840.00	12.70	158.41	S 21 35 E	0.21	5709.29	1040.0	162.7	992.84 S	309.60 E
5845.00	12.83	158.36	S 21 39 E	0.13	5714.17	1041.1	162.7	993.87 S	310.00 E
5850.00	12.88	158.34	S 21 39 E	0.05	5719.04	1042.2	162.7	994.90 S	310.41 E
5855.00	12.92	158.33	S 21 40 E	0.03	5723.92	1043.3	162.7	995.94 S	310.83 E
5860.00	12.93	158.32	S 21 41 E	0.01	5728.79	1044.4	162.7	996.98 S	311.24 E
5865.00	12.93	158.29	S 21 42 E	0.01	5733.66	1045.5	162.7	998.02 S	311.65 E
5870.00	12.95	158.24	S 21 46 E	0.02	5738.54	1046.7	162.7	999.06 S	312.07 E
5875.00	12.98	158.29	S 21 42 E	0.03	5743.41	1047.8	162.6	1000.10 S	312.48 E
5880.00	12.99	158.36	S 21 38 E	0.02	5748.28	1048.9	162.6	1001.14 S	312.90 E
5885.00	12.99	158.31	S 21 41 E	0.01	5753.15	1050.0	162.6	1002.19 S	313.31 E
5890.00	13.00	158.31	S 21 41 E	0.01	5758.03	1051.1	162.6	1003.23 S	313.73 E
5895.00	13.01	158.28	S 21 43 E	0.01	5762.90	1052.3	162.6	1004.28 S	314.14 E
5900.00	13.01	158.26	S 21 44 E	0.01	5767.77	1053.4	162.6	1005.32 S	314.56 E
5905.00	13.02	158.24	S 21 46 E	0.01	5772.64	1054.5	162.6	1006.37 S	314.98 E
5910.00	13.02	158.24	S 21 46 E	0.01	5777.51	1055.6	162.6	1007.41 S	315.40 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
5915.00	13.05	158.32	S 21 41 E	0.04	5782.38	1056.8	162.6	1008.46 S	315.81 E
5920.00	13.08	158.37	S 21 38 E	0.03	5787.25	1057.9	162.6	1009.51 S	316.23 E
5925.00	13.07	158.33	S 21 40 E	0.01	5792.12	1059.0	162.6	1010.56 S	316.65 E
5930.00	13.07	158.26	S 21 45 E	0.02	5796.99	1060.1	162.6	1011.61 S	317.07 E
5935.00	13.07	158.27	S 21 44 E	0.01	5801.87	1061.3	162.6	1012.67 S	317.49 E
5940.00	13.09	158.27	S 21 44 E	0.01	5806.74	1062.4	162.6	1013.72 S	317.90 E
5945.00	13.10	158.29	S 21 42 E	0.02	5811.61	1063.5	162.6	1014.77 S	318.32 E
5950.00	13.11	158.26	S 21 44 E	0.01	5816.48	1064.7	162.6	1015.82 S	318.74 E
5955.00	13.12	158.25	S 21 45 E	0.01	5821.34	1065.8	162.6	1016.88 S	319.16 E
5960.00	13.14	158.26	S 21 44 E	0.02	5826.21	1066.9	162.6	1017.93 S	319.58 E
5965.00	13.16	158.29	S 21 43 E	0.02	5831.08	1068.1	162.6	1018.99 S	320.00 E
5970.00	13.18	158.28	S 21 43 E	0.02	5835.95	1069.2	162.6	1020.05 S	320.43 E
5975.00	13.18	158.25	S 21 45 E	0.01	5840.82	1070.3	162.6	1021.10 S	320.85 E
5980.00	13.20	158.24	S 21 46 E	0.02	5845.69	1071.5	162.6	1022.16 S	321.27 E
5985.00	13.22	158.27	S 21 44 E	0.03	5850.56	1072.6	162.5	1023.23 S	321.69 E
5990.00	13.25	158.24	S 21 46 E	0.03	5855.42	1073.7	162.5	1024.29 S	322.12 E
5995.00	13.26	158.23	S 21 46 E	0.01	5860.29	1074.9	162.5	1025.35 S	322.54 E
6000.00	13.27	158.23	S 21 46 E	0.01	5865.16	1076.0	162.5	1026.42 S	322.97 E
6005.00	13.30	158.24	S 21 46 E	0.03	5870.02	1077.2	162.5	1027.48 S	323.40 E
6010.00	13.36	158.21	S 21 48 E	0.06	5874.89	1078.3	162.5	1028.56 S	323.82 E
6015.00	13.40	158.29	S 21 43 E	0.05	5879.75	1079.5	162.5	1029.63 S	324.25 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
6020.00	13.46	158.44	S 21 33 E	0.06	5884.62	1080.6	162.5	1030.71 S	324.68 E
6025.00	13.54	158.69	S 21 19 E	0.10	5889.48	1081.8	162.5	1031.80 S	325.11 E
6030.00	13.61	158.95	S 21 3 E	0.09	5894.34	1083.0	162.5	1032.89 S	325.53 E
6035.00	13.69	159.14	S 20 51 E	0.09	5899.20	1084.2	162.5	1033.99 S	325.95 E
6040.00	13.79	159.44	S 20 34 E	0.13	5904.05	1085.3	162.5	1035.10 S	326.37 E
6045.00	13.88	159.75	S 20 15 E	0.11	5908.91	1086.5	162.5	1036.22 S	326.79 E
6050.00	13.91	159.91	S 20 5 E	0.05	5913.76	1087.7	162.5	1037.35 S	327.20 E
6055.00	13.95	160.01	S 19 59 E	0.04	5918.61	1088.9	162.5	1038.48 S	327.62 E
6060.00	13.97	160.05	S 19 57 E	0.03	5923.47	1090.1	162.5	1039.62 S	328.03 E
6065.00	14.01	160.11	S 19 54 E	0.04	5928.32	1091.3	162.5	1040.75 S	328.44 E
6070.00	14.04	160.13	S 19 52 E	0.03	5933.17	1092.6	162.5	1041.89 S	328.85 E
6075.00	14.08	160.13	S 19 52 E	0.04	5938.02	1093.8	162.5	1043.03 S	329.26 E
6080.00	14.11	160.22	S 19 47 E	0.03	5942.87	1095.0	162.5	1044.18 S	329.68 E
6085.00	14.10	160.29	S 19 43 E	0.02	5947.72	1096.2	162.5	1045.33 S	330.09 E
6090.00	14.08	160.29	S 19 43 E	0.02	5952.57	1097.4	162.5	1046.47 S	330.50 E
6095.00	14.10	160.28	S 19 43 E	0.02	5957.42	1098.6	162.5	1047.62 S	330.91 E
6100.00	14.12	160.26	S 19 45 E	0.01	5962.27	1099.9	162.5	1048.77 S	331.32 E
6105.00	14.13	160.24	S 19 45 E	0.02	5967.12	1101.1	162.5	1049.91 S	331.73 E
6110.00	14.15	160.26	S 19 44 E	0.01	5971.96	1102.3	162.5	1051.06 S	332.15 E
6115.00	14.16	160.24	S 19 45 E	0.01	5976.81	1103.5	162.5	1052.21 S	332.56 E
6120.00	14.17	160.25	S 19 45 E	0.01	5981.66	1104.7	162.5	1053.37 S	332.97 E
6125.00	14.17	160.34	S 19 40 E	0.02	5986.51	1106.0	162.5	1054.52 S	333.39 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
6130.00	14.19	160.29	S 19 42 E	0.02	5991.36	1107.2	162.5	1055.67 S	333.80 E
6135.00	14.19	160.26	S 19 45 E	0.01	5996.20	1108.4	162.5	1056.83 S	334.21 E
6140.00	14.21	160.32	S 19 41 E	0.03	6001.05	1109.6	162.4	1057.98 S	334.63 E
6145.00	14.21	160.35	S 19 39 E	0.01	6005.90	1110.9	162.4	1059.14 S	335.04 E
6150.00	14.21	160.34	S 19 40 E	0.00	6010.74	1112.1	162.4	1060.29 S	335.45 E
6155.00	14.22	160.28	S 19 43 E	0.01	6015.59	1113.3	162.4	1061.45 S	335.87 E
6160.00	14.21	160.25	S 19 45 E	0.01	6020.44	1114.5	162.4	1062.60 S	336.28 E
6165.00	14.18	160.11	S 19 54 E	0.05	6025.29	1115.8	162.4	1063.76 S	336.70 E
6170.00	14.16	159.95	S 20 3 E	0.05	6030.13	1117.0	162.4	1064.91 S	337.11 E
6175.00	14.15	159.90	S 20 6 E	0.02	6034.98	1118.2	162.4	1066.06 S	337.53 E
6180.00	14.18	159.86	S 20 8 E	0.03	6039.83	1119.4	162.4	1067.21 S	337.95 E
6185.00	14.19	159.83	S 20 10 E	0.02	6044.68	1120.7	162.4	1068.36 S	338.38 E
6190.00	14.20	159.83	S 20 10 E	0.01	6049.52	1121.9	162.4	1069.51 S	338.80 E
6195.00	14.21	159.82	S 20 11 E	0.01	6054.37	1123.1	162.4	1070.66 S	339.22 E
6200.00	14.20	159.81	S 20 11 E	0.00	6059.22	1124.3	162.4	1071.81 S	339.65 E
6205.00	14.18	159.75	S 20 15 E	0.03	6064.07	1125.6	162.4	1072.96 S	340.07 E
6210.00	14.14	159.73	S 20 16 E	0.04	6068.91	1126.8	162.4	1074.11 S	340.49 E
6215.00	14.09	159.71	S 20 18 E	0.05	6073.76	1128.0	162.4	1075.25 S	340.92 E
6220.00	14.08	159.70	S 20 18 E	0.01	6078.61	1129.2	162.4	1076.39 S	341.34 E
6225.00	14.09	159.70	S 20 18 E	0.00	6083.46	1130.4	162.4	1077.53 S	341.76 E
6230.00	14.10	159.69	S 20 19 E	0.01	6088.31	1131.6	162.4	1078.67 S	342.18 E
6235.00	14.10	159.70	S 20 18 E	0.00	6093.16	1132.9	162.4	1079.82 S	342.61 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
6240.00	14.09	159.67	S 20 20 E	0.01	6098.01	1134.1	162.4	1080.96 S	343.03 E
6245.00	14.07	159.53	S 20 28 E	0.04	6102.86	1135.3	162.4	1082.10 S	343.45 E
6250.00	14.05	159.42	S 20 35 E	0.03	6107.71	1136.5	162.4	1083.24 S	343.88 E
6255.00	14.01	159.28	S 20 43 E	0.05	6112.56	1137.7	162.4	1084.37 S	344.31 E
6260.00	13.93	159.02	S 20 59 E	0.10	6117.41	1138.9	162.4	1085.50 S	344.74 E
6265.00	13.72	158.42	S 21 35 E	0.25	6122.27	1140.1	162.4	1086.61 S	345.17 E
6270.00	13.46	157.70	S 22 18 E	0.31	6127.13	1141.3	162.4	1087.70 S	345.61 E
6275.00	13.29	157.20	S 22 48 E	0.21	6131.99	1142.4	162.4	1088.77 S	346.05 E
6280.00	13.19	157.01	S 22 59 E	0.10	6136.86	1143.6	162.4	1089.82 S	346.50 E
6285.00	13.13	156.77	S 23 14 E	0.09	6141.73	1144.7	162.4	1090.87 S	346.94 E
6290.00	13.09	156.47	S 23 32 E	0.08	6146.60	1145.8	162.4	1091.91 S	347.39 E
6295.00	13.04	156.22	S 23 47 E	0.07	6151.47	1147.0	162.3	1092.95 S	347.85 E
6300.00	12.94	155.97	S 24 2 E	0.11	6156.34	1148.1	162.3	1093.98 S	348.30 E
6305.00	12.83	155.69	S 24 18 E	0.13	6161.22	1149.2	162.3	1094.99 S	348.76 E
6310.00	12.77	155.55	S 24 27 E	0.07	6166.09	1150.3	162.3	1096.00 S	349.22 E
6315.00	12.75	155.43	S 24 34 E	0.03	6170.97	1151.4	162.3	1097.01 S	349.67 E
6320.00	12.74	155.31	S 24 41 E	0.03	6175.84	1152.5	162.3	1098.01 S	350.13 E
6325.00	12.69	155.20	S 24 48 E	0.05	6180.72	1153.6	162.3	1099.01 S	350.59 E
6330.00	12.63	155.22	S 24 47 E	0.06	6185.60	1154.7	162.3	1100.00 S	351.05 E
6335.00	12.56	155.21	S 24 47 E	0.07	6190.48	1155.7	162.3	1100.99 S	351.51 E
6340.00	12.52	155.09	S 24 55 E	0.05	6195.36	1156.8	162.3	1101.98 S	351.97 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
6345.00	12.50	154.98	S 25 1 E	0.04	6200.24	1157.9	162.3	1102.96 S	352.42 E
6350.00	12.49	154.91	S 25 5 E	0.02	6205.12	1159.0	162.3	1103.94 S	352.88 E
6355.00	12.47	154.85	S 25 9 E	0.02	6210.01	1160.0	162.3	1104.92 S	353.34 E
6360.00	12.43	154.75	S 25 15 E	0.05	6214.89	1161.1	162.3	1105.89 S	353.80 E
6365.00	12.34	154.56	S 25 26 E	0.09	6219.77	1162.2	162.3	1106.86 S	354.26 E
6370.00	12.17	154.19	S 25 49 E	0.19	6224.66	1163.2	162.2	1107.82 S	354.72 E
6375.00	11.88	153.52	S 26 29 E	0.33	6229.55	1164.3	162.2	1108.75 S	355.18 E
6380.00	11.64	152.87	S 27 8 E	0.28	6234.44	1165.3	162.2	1109.66 S	355.64 E
6385.00	11.53	152.59	S 27 24 E	0.12	6239.34	1166.3	162.2	1110.56 S	356.10 E
6390.00	11.46	152.40	S 27 36 E	0.08	6244.24	1167.2	162.2	1111.44 S	356.56 E
6395.00	11.38	152.17	S 27 50 E	0.10	6249.14	1168.2	162.2	1112.32 S	357.02 E
6400.00	11.28	151.93	S 28 4 E	0.11	6254.04	1169.2	162.2	1113.18 S	357.48 E
6405.00	11.19	151.76	S 28 14 E	0.09	6258.95	1170.1	162.2	1114.04 S	357.94 E
6410.00	11.13	151.58	S 28 25 E	0.07	6263.85	1171.1	162.2	1114.90 S	358.40 E
6415.00	11.10	151.48	S 28 31 E	0.04	6268.76	1172.0	162.2	1115.74 S	358.86 E
6420.00	11.07	151.39	S 28 37 E	0.03	6273.67	1173.0	162.2	1116.59 S	359.32 E
6425.00	11.05	151.40	S 28 36 E	0.03	6278.57	1173.9	162.2	1117.43 S	359.77 E
6430.00	11.00	151.31	S 28 42 E	0.05	6283.48	1174.9	162.1	1118.27 S	360.23 E
6435.00	10.96	151.22	S 28 47 E	0.05	6288.39	1175.8	162.1	1119.10 S	360.69 E
6440.00	10.91	151.20	S 28 48 E	0.05	6293.30	1176.7	162.1	1119.93 S	361.15 E
6445.00	10.84	151.14	S 28 52 E	0.07	6298.21	1177.7	162.1	1120.76 S	361.60 E
6450.00	10.80	151.12	S 28 53 E	0.04	6303.12	1178.6	162.1	1121.58 S	362.06 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
6455.00	10.78	151.08	S 28 55 E	0.02	6308.03	1179.5	162.1	1122.40 S	362.51 E
6460.00	10.78	151.06	S 28 56 E	0.01	6312.94	1180.4	162.1	1123.22 S	362.96 E
6465.00	10.76	150.92	S 29 5 E	0.03	6317.86	1181.3	162.1	1124.04 S	363.41 E
6470.00	10.76	150.88	S 29 7 E	0.01	6322.77	1182.2	162.1	1124.85 S	363.87 E
6475.00	10.75	150.84	S 29 10 E	0.01	6327.68	1183.2	162.1	1125.67 S	364.32 E
6480.00	10.74	150.78	S 29 13 E	0.01	6332.59	1184.1	162.1	1126.48 S	364.78 E
6485.00	10.74	150.73	S 29 16 E	0.01	6337.51	1185.0	162.0	1127.30 S	365.23 E
6490.00	10.74	150.75	S 29 15 E	0.00	6342.42	1185.9	162.0	1128.11 S	365.69 E
6495.00	10.73	150.68	S 29 19 E	0.01	6347.33	1186.8	162.0	1128.92 S	366.14 E
6500.00	10.71	150.61	S 29 23 E	0.03	6352.24	1187.7	162.0	1129.73 S	366.60 E
6505.00	10.71	150.63	S 29 22 E	0.01	6357.16	1188.6	162.0	1130.54 S	367.06 E
6510.00	10.67	150.65	S 29 21 E	0.03	6362.07	1189.5	162.0	1131.35 S	367.51 E
6515.00	10.60	150.61	S 29 23 E	0.07	6366.98	1190.4	162.0	1132.15 S	367.96 E
6520.00	10.57	150.56	S 29 26 E	0.03	6371.90	1191.3	162.0	1132.95 S	368.41 E
6525.00	10.56	150.50	S 29 30 E	0.01	6376.81	1192.2	162.0	1133.75 S	368.86 E
6530.00	10.55	150.57	S 29 26 E	0.02	6381.73	1193.1	162.0	1134.55 S	369.32 E
6535.00	10.49	150.61	S 29 23 E	0.06	6386.64	1194.0	162.0	1135.35 S	369.76 E
6540.00	10.42	150.61	S 29 23 E	0.07	6391.56	1194.9	162.0	1136.14 S	370.21 E
6545.00	10.37	150.48	S 29 31 E	0.05	6396.48	1195.8	161.9	1136.92 S	370.65 E
6550.00	10.34	150.42	S 29 35 E	0.04	6401.40	1196.7	161.9	1137.70 S	371.10 E
6555.00	10.31	150.38	S 29 37 E	0.03	6406.32	1197.6	161.9	1138.48 S	371.54 E
6560.00	10.29	150.39	S 29 36 E	0.01	6411.24	1198.4	161.9	1139.26 S	371.98 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
6565.00	10.30	150.35	S 29 39 E	0.01	6416.16	1199.3	161.9	1140.04 S	372.42 E
6570.00	10.27	150.27	S 29 44 E	0.03	6421.08	1200.2	161.9	1140.81 S	372.86 E
6575.00	10.22	150.23	S 29 46 E	0.06	6426.00	1201.1	161.9	1141.58 S	373.31 E
6580.00	10.16	150.18	S 29 49 E	0.06	6430.92	1201.9	161.9	1142.35 S	373.74 E
6585.00	10.10	150.09	S 29 55 E	0.06	6435.84	1202.8	161.9	1143.11 S	374.18 E
6590.00	10.04	150.10	S 29 54 E	0.06	6440.76	1203.7	161.9	1143.87 S	374.62 E
6595.00	9.94	150.27	S 29 44 E	0.10	6445.69	1204.5	161.9	1144.62 S	375.05 E
6600.00	9.83	150.51	S 29 29 E	0.12	6450.61	1205.3	161.8	1145.37 S	375.47 E
6605.00	9.72	150.27	S 29 44 E	0.12	6455.54	1206.2	161.8	1146.11 S	375.89 E
6610.00	9.61	150.30	S 29 42 E	0.10	6460.47	1207.0	161.8	1146.84 S	376.31 E
6615.00	9.50	150.71	S 29 18 E	0.13	6465.40	1207.8	161.8	1147.56 S	376.72 E
6620.00	9.36	151.17	S 28 50 E	0.16	6470.33	1208.6	161.8	1148.28 S	377.12 E
6625.00	9.26	151.50	S 28 30 E	0.12	6475.27	1209.4	161.8	1148.99 S	377.50 E
6630.00	9.21	151.97	S 28 2 E	0.09	6480.20	1210.2	161.8	1149.69 S	377.88 E
6635.00	9.17	152.25	S 27 45 E	0.06	6485.14	1211.0	161.8	1150.40 S	378.26 E
6640.00	9.13	152.46	S 27 32 E	0.05	6490.07	1211.8	161.8	1151.10 S	378.63 E
6645.00	9.04	152.93	S 27 4 E	0.12	6495.01	1212.6	161.8	1151.80 S	378.99 E
6650.00	8.91	153.49	S 26 31 E	0.16	6499.95	1213.3	161.8	1152.50 S	379.34 E
6655.00	8.77	153.83	S 26 10 E	0.15	6504.89	1214.1	161.8	1153.19 S	379.68 E
6660.00	8.69	154.30	S 25 42 E	0.11	6509.83	1214.8	161.8	1153.87 S	380.01 E
6665.00	8.63	154.79	S 25 13 E	0.10	6514.78	1215.6	161.8	1154.55 S	380.34 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
6670.00	8.57	154.66	S 25 20 E	0.06	6519.72	1216.3	161.8	1155.23 S	380.66 E
6675.00	8.53	155.03	S 24 58 E	0.06	6524.66	1217.1	161.8	1155.90 S	380.97 E
6680.00	8.49	155.02	S 24 59 E	0.04	6529.61	1217.8	161.8	1156.57 S	381.28 E
6685.00	8.39	155.63	S 24 22 E	0.14	6534.55	1218.5	161.8	1157.24 S	381.59 E
6690.00	8.20	156.44	S 23 34 E	0.22	6539.50	1219.2	161.7	1157.90 S	381.88 E
6695.00	7.94	157.83	S 22 10 E	0.32	6544.45	1219.9	161.7	1158.54 S	382.16 E
6700.00	7.70	158.61	S 21 23 E	0.27	6549.41	1220.6	161.7	1159.17 S	382.41 E
6705.00	7.48	159.71	S 20 17 E	0.26	6554.36	1221.3	161.7	1159.79 S	382.64 E
6710.00	7.29	160.94	S 19 4 E	0.24	6559.32	1221.9	161.7	1160.40 S	382.86 E
6715.00	7.16	161.88	S 18 7 E	0.18	6564.28	1222.6	161.7	1160.99 S	383.06 E
6720.00	7.10	162.14	S 17 51 E	0.06	6569.24	1223.2	161.7	1161.58 S	383.25 E
6725.00	7.09	162.50	S 17 30 E	0.05	6574.20	1223.8	161.7	1162.17 S	383.44 E
6730.00	7.08	162.47	S 17 32 E	0.01	6579.17	1224.4	161.7	1162.76 S	383.63 E
6735.00	7.07	162.51	S 17 29 E	0.01	6584.13	1225.0	161.7	1163.35 S	383.81 E
6740.00	7.05	162.67	S 17 20 E	0.02	6589.09	1225.6	161.7	1163.93 S	383.99 E
6745.00	7.01	163.18	S 16 49 E	0.07	6594.05	1226.3	161.7	1164.52 S	384.17 E
6750.00	6.93	163.81	S 16 11 E	0.11	6599.02	1226.9	161.7	1165.10 S	384.35 E
6755.00	6.84	163.71	S 16 17 E	0.09	6603.98	1227.5	161.7	1165.68 S	384.51 E
6760.00	6.72	163.90	S 16 6 E	0.12	6608.94	1228.0	161.7	1166.24 S	384.68 E
6765.00	6.62	164.39	S 15 37 E	0.12	6613.91	1228.6	161.7	1166.80 S	384.84 E
6770.00	6.58	164.72	S 15 17 E	0.05	6618.88	1229.2	161.7	1167.36 S	384.99 E
6775.00	6.56	164.56	S 15 26 E	0.03	6623.84	1229.8	161.7	1167.91 S	385.14 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
6780.00	6.56	164.92	S 15 5 E	0.04	6628.81	1230.3	161.8	1168.46 S	385.29 E
6785.00	6.53	164.92	S 15 5 E	0.03	6633.78	1230.9	161.8	1169.01 S	385.44 E
6790.00	6.50	164.91	S 15 5 E	0.03	6638.75	1231.5	161.8	1169.56 S	385.59 E
6795.00	6.49	165.22	S 14 47 E	0.04	6643.71	1232.0	161.8	1170.10 S	385.73 E
6800.00	6.49	165.32	S 14 41 E	0.01	6648.68	1232.6	161.8	1170.65 S	385.88 E
6805.00	6.49	165.54	S 14 27 E	0.03	6653.65	1233.2	161.8	1171.20 S	386.02 E
6810.00	6.47	165.59	S 14 25 E	0.02	6658.62	1233.7	161.8	1171.74 S	386.16 E
6815.00	6.44	165.91	S 14 5 E	0.05	6663.59	1234.3	161.8	1172.29 S	386.30 E
6820.00	6.36	165.85	S 14 9 E	0.08	6668.56	1234.9	161.8	1172.83 S	386.44 E
6825.00	6.29	165.71	S 14 18 E	0.07	6673.53	1235.4	161.8	1173.36 S	386.57 E
6830.00	6.18	165.97	S 14 2 E	0.12	6678.50	1235.9	161.8	1173.89 S	386.70 E
6835.00	6.11	165.62	S 14 23 E	0.08	6683.47	1236.5	161.8	1174.41 S	386.84 E
6840.00	6.10	165.76	S 14 14 E	0.02	6688.44	1237.0	161.8	1174.92 S	386.97 E
6845.00	6.10	165.87	S 14 8 E	0.01	6693.41	1237.5	161.8	1175.44 S	387.10 E
6850.00	6.09	165.36	S 14 38 E	0.05	6698.38	1238.1	161.8	1175.95 S	387.23 E
6855.00	6.08	165.62	S 14 23 E	0.03	6703.35	1238.6	161.8	1176.47 S	387.36 E
6860.00	6.08	166.02	S 13 59 E	0.04	6708.33	1239.1	161.8	1176.98 S	387.49 E
6865.00	6.10	165.74	S 14 16 E	0.03	6713.30	1239.7	161.8	1177.50 S	387.62 E
6870.00	6.09	165.79	S 14 13 E	0.01	6718.27	1240.2	161.8	1178.01 S	387.75 E
6875.00	6.09	165.36	S 14 39 E	0.05	6723.24	1240.7	161.8	1178.52 S	387.88 E
6880.00	6.10	165.70	S 14 18 E	0.04	6728.21	1241.2	161.8	1179.04 S	388.02 E
6885.00	6.10	165.97	S 14 2 E	0.03	6733.18	1241.8	161.8	1179.55 S	388.15 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
6890.00	6.09	165.97	S 14 2 E	0.01	6738.16	1242.3	161.8	1180.07 S	388.28 E
6895.00	6.07	166.23	S 13 46 E	0.04	6743.13	1242.8	161.8	1180.58 S	388.40 E
6900.00	6.03	166.29	S 13 43 E	0.05	6748.10	1243.4	161.8	1181.09 S	388.53 E
6905.00	6.00	166.61	S 13 24 E	0.05	6753.07	1243.9	161.8	1181.60 S	388.65 E
6910.00	5.96	166.42	S 13 35 E	0.04	6758.05	1244.4	161.8	1182.11 S	388.77 E
6915.00	5.93	166.42	S 13 35 E	0.03	6763.02	1244.9	161.8	1182.61 S	388.89 E
6920.00	5.91	166.44	S 13 34 E	0.02	6767.99	1245.4	161.8	1183.12 S	389.01 E
6925.00	5.87	166.97	S 13 2 E	0.07	6772.97	1245.9	161.8	1183.61 S	389.13 E
6930.00	5.78	166.84	S 13 10 E	0.09	6777.94	1246.4	161.8	1184.11 S	389.25 E
6935.00	5.62	167.29	S 12 43 E	0.17	6782.91	1246.9	161.8	1184.59 S	389.36 E
6940.00	5.35	167.67	S 12 20 E	0.27	6787.89	1247.4	161.8	1185.06 S	389.46 E
6945.00	4.91	168.28	S 11 43 E	0.45	6792.87	1247.9	161.8	1185.50 S	389.56 E
6950.00	4.50	169.45	S 10 33 E	0.42	6797.86	1248.3	161.8	1185.90 S	389.64 E
6955.00	4.12	170.13	S 9 52 E	0.38	6802.84	1248.6	161.8	1186.27 S	389.70 E
6960.00	3.90	170.42	S 9 35 E	0.22	6807.83	1249.0	161.8	1186.61 S	389.76 E
6965.00	3.81	170.71	S 9 17 E	0.09	6812.82	1249.3	161.8	1186.94 S	389.82 E
6970.00	3.77	170.93	S 9 4 E	0.04	6817.81	1249.6	161.8	1187.27 S	389.87 E
6975.00	3.74	170.98	S 9 1 E	0.03	6822.80	1250.0	161.8	1187.59 S	389.92 E
6980.00	3.74	170.83	S 9 10 E	0.01	6827.78	1250.3	161.8	1187.92 S	389.97 E
6985.00	3.72	171.28	S 8 43 E	0.03	6832.77	1250.6	161.8	1188.24 S	390.02 E
6990.00	3.71	171.19	S 8 49 E	0.01	6837.76	1250.9	161.8	1188.56 S	390.07 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
6995.00	3.68	171.22	S 8 47 E	0.03	6842.75	1251.2	161.8	1188.88 S	390.12 E
7000.00	3.68	171.04	S 8 58 E	0.01	6847.74	1251.6	161.8	1189.19 S	390.17 E
7005.00	3.66	170.52	S 9 29 E	0.04	6852.73	1251.9	161.8	1189.51 S	390.22 E
7010.00	3.66	170.60	S 9 24 E	0.01	6857.72	1252.2	161.8	1189.83 S	390.27 E
7015.00	3.65	170.83	S 9 10 E	0.02	6862.71	1252.5	161.8	1190.14 S	390.33 E
7020.00	3.65	170.71	S 9 18 E	0.01	6867.70	1252.8	161.8	1190.45 S	390.38 E
7025.00	3.65	170.52	S 9 29 E	0.01	6872.69	1253.1	161.8	1190.77 S	390.43 E
7030.00	3.64	170.79	S 9 13 E	0.02	6877.68	1253.5	161.8	1191.08 S	390.48 E
7035.00	3.66	170.62	S 9 23 E	0.02	6882.67	1253.8	161.9	1191.40 S	390.53 E
7040.00	3.66	170.99	S 9 0 E	0.02	6887.66	1254.1	161.9	1191.71 S	390.58 E
7045.00	3.67	170.23	S 9 46 E	0.05	6892.65	1254.4	161.9	1192.03 S	390.63 E
7050.00	3.67	170.68	S 9 19 E	0.03	6897.64	1254.7	161.9	1192.34 S	390.69 E
7055.00	3.66	170.42	S 9 35 E	0.02	6902.63	1255.0	161.9	1192.66 S	390.74 E
7060.00	3.63	170.72	S 9 17 E	0.03	6907.62	1255.3	161.9	1192.97 S	390.79 E
7065.00	3.59	170.51	S 9 30 E	0.04	6912.61	1255.7	161.9	1193.28 S	390.84 E
7070.00	3.49	170.70	S 9 18 E	0.11	6917.60	1256.0	161.9	1193.59 S	390.89 E
7075.00	3.41	171.01	S 8 59 E	0.08	6922.59	1256.3	161.9	1193.88 S	390.94 E
7080.00	3.32	171.07	S 8 56 E	0.09	6927.58	1256.6	161.9	1194.17 S	390.99 E
7085.00	3.28	170.77	S 9 14 E	0.04	6932.58	1256.8	161.9	1194.46 S	391.03 E
7090.00	3.22	170.68	S 9 19 E	0.06	6937.57	1257.1	161.9	1194.74 S	391.08 E
7095.00	3.14	170.64	S 9 21 E	0.08	6942.56	1257.4	161.9	1195.01 S	391.12 E
7100.00	3.04	170.26	S 9 45 E	0.10	6947.55	1257.7	161.9	1195.28 S	391.17 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
7105.00	2.87	169.28	S 10 43 E	0.18	6952.55	1257.9	161.9	1195.53 S	391.21 E
7110.00	2.64	168.44	S 11 34 E	0.23	6957.54	1258.1	161.9	1195.76 S	391.26 E
7115.00	2.42	167.77	S 12 14 E	0.22	6962.54	1258.4	161.9	1195.98 S	391.31 E
7120.00	2.25	167.60	S 12 24 E	0.16	6967.53	1258.6	161.9	1196.18 S	391.35 E
7125.00	2.08	167.76	S 12 14 E	0.17	6972.53	1258.8	161.9	1196.36 S	391.39 E
7130.00	1.85	167.09	S 12 55 E	0.23	6977.52	1258.9	161.9	1196.53 S	391.43 E
7135.00	1.61	166.29	S 13 42 E	0.24	6982.52	1259.1	161.9	1196.68 S	391.46 E
7140.00	1.43	165.85	S 14 9 E	0.18	6987.52	1259.2	161.9	1196.81 S	391.49 E
7145.00	1.35	165.38	S 14 37 E	0.08	6992.52	1259.3	161.9	1196.92 S	391.52 E
7150.00	1.29	164.44	S 15 34 E	0.06	6997.52	1259.4	161.9	1197.04 S	391.55 E
7155.00	1.25	163.96	S 16 3 E	0.04	7002.52	1259.6	161.9	1197.14 S	391.58 E
7160.00	1.20	163.84	S 16 10 E	0.05	7007.52	1259.7	161.9	1197.25 S	391.61 E
7165.00	1.16	163.10	S 16 54 E	0.04	7012.51	1259.8	161.9	1197.34 S	391.64 E
7170.00	1.13	163.13	S 16 52 E	0.03	7017.51	1259.9	161.9	1197.44 S	391.67 E
7175.00	1.12	163.07	S 16 56 E	0.02	7022.51	1260.0	161.9	1197.53 S	391.70 E
7180.00	1.11	162.84	S 17 10 E	0.01	7027.51	1260.1	161.9	1197.63 S	391.73 E
7185.00	1.12	163.52	S 16 29 E	0.01	7032.51	1260.2	161.9	1197.72 S	391.76 E
7190.00	1.10	163.95	S 16 3 E	0.02	7037.51	1260.3	161.9	1197.81 S	391.78 E
7195.00	1.09	163.23	S 16 46 E	0.02	7042.51	1260.4	161.9	1197.91 S	391.81 E
7200.00	1.09	161.67	S 18 20 E	0.03	7047.51	1260.4	161.9	1198.00 S	391.84 E
7205.00	1.12	160.77	S 19 14 E	0.04	7052.51	1260.5	161.9	1198.09 S	391.87 E
7210.00	1.15	162.35	S 17 39 E	0.04	7057.51	1260.6	161.9	1198.18 S	391.90 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
7215.00	1.15	162.75	S 17 15 E	0.01	7062.50	1260.7	161.9	1198.28 S	391.93 E
7220.00	1.15	163.16	S 16 50 E	0.01	7067.50	1260.8	161.9	1198.37 S	391.96 E
7225.00	1.15	163.42	S 16 35 E	0.01	7072.50	1260.9	161.9	1198.47 S	391.99 E
7230.00	1.17	164.09	S 15 55 E	0.02	7077.50	1261.0	161.9	1198.57 S	392.02 E
7235.00	1.17	163.68	S 16 19 E	0.01	7082.50	1261.1	161.9	1198.66 S	392.05 E
7240.00	1.16	163.52	S 16 29 E	0.01	7087.50	1261.3	161.9	1198.76 S	392.08 E
7245.00	1.13	163.74	S 16 16 E	0.03	7092.50	1261.4	161.9	1198.86 S	392.10 E
7250.00	1.15	164.40	S 15 36 E	0.02	7097.50	1261.5	161.9	1198.95 S	392.13 E
7255.00	1.15	163.63	S 16 22 E	0.02	7102.50	1261.6	161.9	1199.05 S	392.16 E
7260.00	1.14	163.34	S 16 40 E	0.01	7107.50	1261.6	161.9	1199.15 S	392.19 E
7265.00	1.14	163.17	S 16 50 E	0.01	7112.49	1261.7	161.9	1199.24 S	392.22 E
7270.00	1.15	163.12	S 16 53 E	0.01	7117.49	1261.8	161.9	1199.34 S	392.25 E
7275.00	1.17	163.20	S 16 48 E	0.01	7122.49	1262.0	161.9	1199.43 S	392.27 E
7280.00	1.17	163.82	S 16 11 E	0.01	7127.49	1262.1	161.9	1199.53 S	392.30 E
7285.00	1.17	163.89	S 16 7 E	0.00	7132.49	1262.2	161.9	1199.63 S	392.33 E
7290.00	1.16	164.35	S 15 39 E	0.01	7137.49	1262.3	161.9	1199.73 S	392.36 E
7295.00	1.16	164.05	S 15 57 E	0.01	7142.49	1262.4	161.9	1199.82 S	392.39 E
7300.00	1.17	164.00	S 16 0 E	0.01	7147.49	1262.5	161.9	1199.92 S	392.41 E
7305.00	1.17	164.12	S 15 53 E	0.01	7152.49	1262.6	161.9	1200.02 S	392.44 E
7310.00	1.18	164.18	S 15 49 E	0.00	7157.49	1262.7	161.9	1200.12 S	392.47 E
7315.00	1.19	163.85	S 16 9 E	0.02	7162.48	1262.8	161.9	1200.22 S	392.50 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
7320.00	1.22	164.41	S 15 36 E	0.03	7167.48	1262.9	161.9	1200.32 S	392.53 E
7325.00	1.23	165.28	S 14 43 E	0.02	7172.48	1263.0	161.9	1200.42 S	392.56 E
7330.00	1.24	166.25	S 13 45 E	0.02	7177.48	1263.1	161.9	1200.53 S	392.58 E
7335.00	1.23	166.48	S 13 31 E	0.01	7182.48	1263.2	161.9	1200.63 S	392.61 E
7340.00	1.23	166.27	S 13 44 E	0.00	7187.48	1263.3	161.9	1200.74 S	392.63 E
7345.00	1.23	166.66	S 13 21 E	0.01	7192.48	1263.4	161.9	1200.84 S	392.66 E
7350.00	1.23	166.66	S 13 21 E	0.00	7197.48	1263.5	161.9	1200.94 S	392.68 E
7355.00	1.23	166.39	S 13 37 E	0.01	7202.48	1263.6	161.9	1201.05 S	392.71 E
7360.00	1.23	166.33	S 13 40 E	0.00	7207.47	1263.7	161.9	1201.15 S	392.73 E
7365.00	1.25	166.60	S 13 24 E	0.03	7212.47	1263.8	161.9	1201.26 S	392.76 E
7370.00	1.27	166.78	S 13 13 E	0.01	7217.47	1263.9	161.9	1201.37 S	392.78 E
7375.00	1.26	168.41	S 11 36 E	0.04	7222.47	1264.1	161.9	1201.47 S	392.81 E
7380.00	1.25	168.33	S 11 41 E	0.01	7227.47	1264.2	161.9	1201.58 S	392.83 E
7385.00	1.24	167.85	S 12 9 E	0.01	7232.47	1264.3	161.9	1201.69 S	392.85 E
7390.00	1.25	167.56	S 12 26 E	0.01	7237.47	1264.4	161.9	1201.79 S	392.88 E
7395.00	1.25	167.79	S 12 12 E	0.01	7242.47	1264.5	161.9	1201.90 S	392.90 E
7400.00	1.25	168.02	S 11 59 E	0.00	7247.46	1264.6	161.9	1202.01 S	392.92 E
7405.00	1.25	168.27	S 11 44 E	0.01	7252.46	1264.7	161.9	1202.11 S	392.94 E
7410.00	1.26	167.67	S 12 20 E	0.02	7257.46	1264.8	161.9	1202.22 S	392.97 E
7415.00	1.27	167.41	S 12 35 E	0.01	7262.46	1264.9	161.9	1202.33 S	392.99 E
7420.00	1.26	167.20	S 12 48 E	0.01	7267.46	1265.0	161.9	1202.44 S	393.02 E
7425.00	1.25	167.18	S 12 49 E	0.01	7272.46	1265.1	161.9	1202.54 S	393.04 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
7430.00	1.25	167.21	S 12 47 E	0.01	7277.46	1265.3	161.9	1202.65 S	393.06 E
7435.00	1.24	167.11	S 12 53 E	0.01	7282.46	1265.4	161.9	1202.76 S	393.09 E
7440.00	1.25	167.34	S 12 40 E	0.01	7287.45	1265.5	161.9	1202.86 S	393.11 E
7445.00	1.25	167.95	S 12 3 E	0.01	7292.45	1265.6	161.9	1202.97 S	393.14 E
7450.00	1.25	168.30	S 11 42 E	0.01	7297.45	1265.7	161.9	1203.08 S	393.16 E
7455.00	1.24	167.98	S 12 1 E	0.02	7302.45	1265.8	161.9	1203.18 S	393.18 E
7460.00	1.22	167.92	S 12 5 E	0.01	7307.45	1265.9	161.9	1203.29 S	393.20 E
7465.00	1.24	168.18	S 11 49 E	0.01	7312.45	1266.0	161.9	1203.39 S	393.22 E
7470.00	1.25	167.86	S 12 8 E	0.01	7317.45	1266.1	161.9	1203.50 S	393.25 E
7475.00	1.25	167.71	S 12 18 E	0.01	7322.45	1266.2	161.9	1203.60 S	393.27 E
7480.00	1.25	167.17	S 12 50 E	0.01	7327.45	1266.3	161.9	1203.71 S	393.29 E
7485.00	1.21	165.95	S 14 3 E	0.05	7332.44	1266.4	161.9	1203.82 S	393.32 E
7490.00	1.22	164.70	S 15 18 E	0.03	7337.44	1266.5	161.9	1203.92 S	393.35 E
7495.00	1.19	162.87	S 17 8 E	0.05	7342.44	1266.7	161.9	1204.02 S	393.38 E
7500.00	1.17	163.37	S 16 38 E	0.02	7347.44	1266.8	161.9	1204.12 S	393.41 E
7505.00	1.16	162.91	S 17 5 E	0.01	7352.44	1266.9	161.9	1204.21 S	393.43 E
7510.00	1.16	163.15	S 16 51 E	0.00	7357.44	1267.0	161.9	1204.31 S	393.46 E
7515.00	1.16	163.09	S 16 55 E	0.00	7362.44	1267.1	161.9	1204.41 S	393.49 E
7520.00	1.16	163.09	S 16 55 E	0.00	7367.44	1267.2	161.9	1204.50 S	393.52 E
7525.00	1.16	163.39	S 16 37 E	0.01	7372.44	1267.3	161.9	1204.60 S	393.55 E
7530.00	1.16	163.53	S 16 28 E	0.00	7377.43	1267.4	161.9	1204.70 S	393.58 E
7535.00	1.15	163.71	S 16 17 E	0.01	7382.43	1267.5	161.9	1204.80 S	393.61 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
7540.00	1.16	162.81	S 17 12 E	0.02	7387.43	1267.6	161.9	1204.89 S	393.64 E
7545.00	1.16	163.16	S 16 50 E	0.01	7392.43	1267.7	161.9	1204.99 S	393.67 E
7550.00	1.16	163.88	S 16 7 E	0.02	7397.43	1267.8	161.9	1205.09 S	393.70 E
7555.00	1.16	163.86	S 16 9 E	0.00	7402.43	1267.9	161.9	1205.18 S	393.72 E
7560.00	1.17	163.92	S 16 5 E	0.00	7407.43	1268.0	161.9	1205.28 S	393.75 E
7565.00	1.16	164.78	S 15 13 E	0.02	7412.43	1268.1	161.9	1205.38 S	393.78 E
7570.00	1.15	164.58	S 15 25 E	0.02	7417.43	1268.2	161.9	1205.48 S	393.81 E
7575.00	1.14	164.78	S 15 13 E	0.01	7422.43	1268.3	161.9	1205.57 S	393.83 E
7580.00	1.15	163.53	S 16 29 E	0.03	7427.42	1268.4	161.9	1205.67 S	393.86 E
7585.00	1.15	162.84	S 17 10 E	0.01	7432.42	1268.5	161.9	1205.77 S	393.89 E
7590.00	1.17	163.01	S 17 0 E	0.01	7437.42	1268.6	161.9	1205.86 S	393.92 E
7595.00	1.15	162.82	S 17 11 E	0.01	7442.42	1268.7	161.9	1205.96 S	393.95 E
7600.00	1.16	162.52	S 17 29 E	0.01	7447.42	1268.8	161.9	1206.05 S	393.98 E
7605.00	1.17	162.11	S 17 53 E	0.01	7452.42	1268.9	161.9	1206.15 S	394.01 E
7610.00	1.16	160.70	S 19 18 E	0.03	7457.42	1269.0	161.9	1206.25 S	394.04 E
7615.00	1.18	160.23	S 19 46 E	0.02	7462.42	1269.1	161.9	1206.34 S	394.08 E
7620.00	1.19	159.58	S 20 25 E	0.02	7467.42	1269.2	161.9	1206.44 S	394.11 E
7625.00	1.17	158.94	S 21 4 E	0.02	7472.42	1269.3	161.9	1206.54 S	394.15 E
7630.00	1.16	159.09	S 20 55 E	0.01	7477.41	1269.4	161.9	1206.63 S	394.18 E
7635.00	1.16	158.00	S 22 0 E	0.02	7482.41	1269.5	161.9	1206.73 S	394.22 E
7640.00	1.18	157.57	S 22 26 E	0.02	7487.41	1269.6	161.9	1206.82 S	394.26 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
7645.00	1.21	157.51	S 22 29 E	0.03	7492.41	1269.7	161.9	1206.92 S	394.30 E
7650.00	1.23	156.53	S 23 28 E	0.03	7497.41	1269.8	161.9	1207.02 S	394.34 E
7655.00	1.25	154.06	S 25 56 E	0.06	7502.41	1269.9	161.9	1207.11 S	394.39 E
7660.00	1.27	151.28	S 28 43 E	0.06	7507.41	1270.0	161.9	1207.21 S	394.44 E
7665.00	1.30	148.38	S 31 37 E	0.07	7512.41	1270.1	161.9	1207.31 S	394.49 E
7670.00	1.32	146.85	S 33 9 E	0.04	7517.41	1270.2	161.9	1207.40 S	394.56 E
7675.00	1.32	145.68	S 34 19 E	0.03	7522.40	1270.3	161.9	1207.50 S	394.62 E
7680.00	1.32	145.70	S 34 18 E	0.00	7527.40	1270.5	161.9	1207.60 S	394.68 E
7685.00	1.33	145.72	S 34 17 E	0.01	7532.40	1270.6	161.9	1207.69 S	394.75 E
7690.00	1.33	146.26	S 33 44 E	0.01	7537.40	1270.7	161.9	1207.79 S	394.81 E
7695.00	1.34	146.04	S 33 57 E	0.01	7542.40	1270.8	161.9	1207.88 S	394.88 E
7700.00	1.35	145.42	S 34 35 E	0.01	7547.40	1270.9	161.9	1207.98 S	394.95 E
7705.00	1.35	145.41	S 34 35 E	0.00	7552.40	1271.0	161.9	1208.08 S	395.01 E
7710.00	1.34	145.05	S 34 57 E	0.01	7557.39	1271.1	161.9	1208.18 S	395.08 E
7715.00	1.33	145.38	S 34 37 E	0.01	7562.39	1271.2	161.9	1208.27 S	395.15 E
7720.00	1.34	145.67	S 34 20 E	0.01	7567.39	1271.4	161.9	1208.37 S	395.21 E
7725.00	1.33	145.95	S 34 3 E	0.01	7572.39	1271.5	161.9	1208.46 S	395.28 E
7730.00	1.33	145.73	S 34 16 E	0.01	7577.39	1271.6	161.9	1208.56 S	395.34 E
7735.00	1.34	145.00	S 35 0 E	0.02	7582.39	1271.7	161.9	1208.66 S	395.41 E
7740.00	1.35	143.80	S 36 12 E	0.03	7587.39	1271.8	161.9	1208.75 S	395.48 E
7745.00	1.36	143.86	S 36 8 E	0.00	7592.38	1271.9	161.9	1208.85 S	395.55 E
7750.00	1.35	143.81	S 36 12 E	0.01	7597.38	1272.0	161.9	1208.94 S	395.62 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
7755.00	1.35	143.15	S 36 51 E	0.02	7602.38	1272.1	161.9	1209.04 S	395.69 E
7760.00	1.34	143.76	S 36 14 E	0.02	7607.38	1272.2	161.9	1209.13 S	395.76 E
7765.00	1.33	144.10	S 35 54 E	0.01	7612.38	1272.4	161.9	1209.22 S	395.83 E
7770.00	1.33	143.43	S 36 34 E	0.02	7617.38	1272.5	161.9	1209.32 S	395.89 E
7775.00	1.35	143.23	S 36 46 E	0.02	7622.38	1272.6	161.9	1209.41 S	395.96 E
7780.00	1.36	142.66	S 37 20 E	0.02	7627.37	1272.7	161.9	1209.51 S	396.03 E
7785.00	1.41	142.73	S 37 16 E	0.05	7632.37	1272.8	161.9	1209.60 S	396.11 E
7790.00	1.40	142.60	S 37 24 E	0.00	7637.37	1272.9	161.9	1209.70 S	396.18 E
7795.00	1.39	142.62	S 37 23 E	0.02	7642.37	1273.0	161.9	1209.80 S	396.26 E
7800.00	1.38	142.74	S 37 16 E	0.01	7647.37	1273.2	161.9	1209.89 S	396.33 E
7805.00	1.37	143.08	S 36 55 E	0.01	7652.37	1273.3	161.9	1209.99 S	396.40 E
7810.00	1.38	143.06	S 36 56 E	0.01	7657.37	1273.4	161.9	1210.08 S	396.47 E
7815.00	1.39	142.64	S 37 22 E	0.01	7662.36	1273.5	161.9	1210.18 S	396.55 E
7820.00	1.41	141.55	S 38 27 E	0.03	7667.36	1273.6	161.9	1210.28 S	396.62 E
7825.00	1.46	139.51	S 40 30 E	0.08	7672.36	1273.7	161.9	1210.37 S	396.70 E
7830.00	1.53	137.46	S 42 33 E	0.08	7677.36	1273.8	161.9	1210.47 S	396.79 E
7835.00	1.56	137.33	S 42 40 E	0.03	7682.36	1274.0	161.8	1210.57 S	396.88 E
7840.00	1.57	137.32	S 42 41 E	0.01	7687.36	1274.1	161.8	1210.67 S	396.97 E
7845.00	1.57	137.08	S 42 55 E	0.01	7692.35	1274.2	161.8	1210.77 S	397.06 E
7850.00	1.58	136.57	S 43 26 E	0.02	7697.35	1274.3	161.8	1210.87 S	397.16 E
7855.00	1.60	136.84	S 43 9 E	0.01	7702.35	1274.5	161.8	1210.97 S	397.25 E
7860.00	1.60	136.99	S 43 1 E	0.00	7707.35	1274.6	161.8	1211.07 S	397.35 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
7865.00	1.62	137.16	S 42 51 E	0.02	7712.35	1274.7	161.8	1211.18 S	397.44 E
7870.00	1.62	136.79	S 43 13 E	0.01	7717.34	1274.8	161.8	1211.28 S	397.54 E
7875.00	1.65	135.87	S 44 8 E	0.04	7722.34	1275.0	161.8	1211.38 S	397.64 E
7880.00	1.66	135.30	S 44 42 E	0.02	7727.34	1275.1	161.8	1211.49 S	397.74 E
7885.00	1.68	135.86	S 44 8 E	0.02	7732.34	1275.2	161.8	1211.59 S	397.84 E
7890.00	1.69	136.01	S 43 59 E	0.02	7737.34	1275.4	161.8	1211.70 S	397.94 E
7895.00	1.69	136.02	S 43 59 E	0.00	7742.33	1275.5	161.8	1211.80 S	398.05 E
7900.00	1.68	137.00	S 43 0 E	0.03	7747.33	1275.6	161.8	1211.91 S	398.15 E
7905.00	1.66	136.56	S 43 27 E	0.02	7752.33	1275.8	161.8	1212.01 S	398.25 E
7910.00	1.68	135.51	S 44 29 E	0.04	7757.33	1275.9	161.8	1212.12 S	398.35 E
7915.00	1.70	135.48	S 44 31 E	0.02	7762.33	1276.0	161.8	1212.23 S	398.45 E
7920.00	1.71	135.57	S 44 26 E	0.01	7767.32	1276.2	161.8	1212.33 S	398.56 E
7925.00	1.71	135.75	S 44 15 E	0.01	7772.32	1276.3	161.8	1212.44 S	398.66 E
7930.00	1.72	135.57	S 44 26 E	0.01	7777.32	1276.4	161.8	1212.55 S	398.77 E
7935.00	1.72	135.43	S 44 34 E	0.01	7782.32	1276.6	161.8	1212.65 S	398.87 E
7940.00	1.72	135.75	S 44 15 E	0.01	7787.31	1276.7	161.8	1212.76 S	398.98 E
7945.00	1.73	135.78	S 44 13 E	0.01	7792.31	1276.8	161.8	1212.87 S	399.08 E
7950.00	1.76	135.88	S 44 7 E	0.03	7797.31	1277.0	161.8	1212.98 S	399.19 E
7955.00	1.76	136.14	S 43 52 E	0.01	7802.31	1277.1	161.8	1213.09 S	399.30 E
7960.00	1.77	135.86	S 44 9 E	0.01	7807.30	1277.3	161.8	1213.20 S	399.40 E
7965.00	1.76	135.93	S 44 4 E	0.01	7812.30	1277.4	161.8	1213.31 S	399.51 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
7970.00	1.76	135.71	S 44 17 E	0.01	7817.30	1277.5	161.8	1213.42 S	399.62 E
7975.00	1.77	135.68	S 44 19 E	0.01	7822.30	1277.7	161.8	1213.53 S	399.72 E
7980.00	1.79	135.43	S 44 34 E	0.02	7827.30	1277.8	161.8	1213.64 S	399.83 E
7985.00	1.83	135.59	S 44 25 E	0.04	7832.29	1277.9	161.8	1213.75 S	399.94 E
7990.00	1.90	135.47	S 44 32 E	0.07	7837.29	1278.1	161.8	1213.87 S	400.06 E
7995.00	1.95	135.19	S 44 49 E	0.05	7842.29	1278.2	161.8	1213.99 S	400.18 E
8000.00	1.98	135.75	S 44 15 E	0.03	7847.28	1278.4	161.8	1214.11 S	400.30 E
8005.00	1.98	135.86	S 44 8 E	0.00	7852.28	1278.6	161.7	1214.23 S	400.42 E
8010.00	1.99	135.60	S 44 24 E	0.02	7857.28	1278.7	161.7	1214.36 S	400.54 E
8015.00	2.02	135.42	S 44 35 E	0.02	7862.28	1278.9	161.7	1214.48 S	400.66 E
8020.00	2.01	135.53	S 44 28 E	0.00	7867.27	1279.0	161.7	1214.61 S	400.78 E
8025.00	2.02	136.15	S 43 51 E	0.02	7872.27	1279.2	161.7	1214.73 S	400.90 E
8030.00	2.00	135.94	S 44 4 E	0.02	7877.27	1279.3	161.7	1214.86 S	401.03 E
8035.00	2.02	136.25	S 43 45 E	0.02	7882.26	1279.5	161.7	1214.99 S	401.15 E
8040.00	2.02	136.29	S 43 43 E	0.00	7887.26	1279.7	161.7	1215.11 S	401.27 E
8045.00	2.01	135.91	S 44 5 E	0.01	7892.26	1279.8	161.7	1215.24 S	401.39 E
8050.00	2.02	135.72	S 44 17 E	0.01	7897.25	1280.0	161.7	1215.37 S	401.51 E
8055.00	2.01	135.88	S 44 7 E	0.01	7902.25	1280.1	161.7	1215.49 S	401.64 E
8060.00	2.01	135.79	S 44 12 E	0.00	7907.25	1280.3	161.7	1215.62 S	401.76 E
8065.00	2.00	135.38	S 44 37 E	0.02	7912.24	1280.4	161.7	1215.74 S	401.88 E
8070.00	2.01	135.53	S 44 28 E	0.01	7917.24	1280.6	161.7	1215.87 S	402.00 E
8075.00	2.02	136.09	S 43 55 E	0.02	7922.24	1280.8	161.7	1216.00 S	402.13 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
8080.00	2.04	135.93	S 44 4 E	0.02	7927.24	1280.9	161.7	1216.12 S	402.25 E
8085.00	2.05	136.07	S 43 56 E	0.01	7932.23	1281.1	161.7	1216.25 S	402.37 E
8090.00	2.05	136.19	S 43 48 E	0.01	7937.23	1281.2	161.7	1216.38 S	402.50 E
8095.00	2.05	135.78	S 44 13 E	0.01	7942.23	1281.4	161.7	1216.51 S	402.62 E
8100.00	2.06	135.38	S 44 37 E	0.02	7947.22	1281.6	161.7	1216.64 S	402.75 E
8105.00	2.07	135.43	S 44 34 E	0.02	7952.22	1281.7	161.7	1216.76 S	402.87 E
8110.00	2.10	135.23	S 44 46 E	0.03	7957.22	1281.9	161.7	1216.89 S	403.00 E
8115.00	2.12	135.59	S 44 25 E	0.02	7962.21	1282.1	161.7	1217.02 S	403.13 E
8120.00	2.12	135.81	S 44 11 E	0.01	7967.21	1282.2	161.7	1217.16 S	403.26 E
8125.00	2.12	136.12	S 43 53 E	0.01	7972.21	1282.4	161.7	1217.29 S	403.39 E
8130.00	2.11	136.54	S 43 28 E	0.02	7977.20	1282.6	161.7	1217.42 S	403.52 E
8135.00	2.12	136.28	S 43 43 E	0.01	7982.20	1282.7	161.7	1217.56 S	403.64 E
8140.00	2.13	136.02	S 43 59 E	0.02	7987.20	1282.9	161.7	1217.69 S	403.77 E
8145.00	2.18	136.40	S 43 36 E	0.05	7992.19	1283.1	161.7	1217.83 S	403.90 E
8150.00	2.20	136.05	S 43 57 E	0.03	7997.19	1283.2	161.6	1217.96 S	404.03 E
8155.00	2.22	135.19	S 44 48 E	0.04	8002.18	1283.4	161.6	1218.10 S	404.17 E
8160.00	2.23	134.82	S 45 11 E	0.02	8007.18	1283.6	161.6	1218.24 S	404.31 E
8165.00	2.24	134.22	S 45 47 E	0.03	8012.18	1283.8	161.6	1218.38 S	404.45 E
8170.00	2.26	134.26	S 45 44 E	0.01	8017.17	1283.9	161.6	1218.51 S	404.59 E
8175.00	2.26	134.38	S 45 37 E	0.01	8022.17	1284.1	161.6	1218.65 S	404.73 E
8180.00	2.28	134.12	S 45 53 E	0.02	8027.17	1284.3	161.6	1218.79 S	404.87 E
8185.00	2.28	133.80	S 46 12 E	0.01	8032.16	1284.5	161.6	1218.93 S	405.01 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
8190.00	2.26	133.77	S 46 14 E	0.02	8037.16	1284.6	161.6	1219.07 S	405.16 E
8195.00	2.25	134.46	S 45 32 E	0.03	8042.15	1284.8	161.6	1219.20 S	405.30 E
8200.00	2.27	135.03	S 44 58 E	0.03	8047.15	1285.0	161.6	1219.34 S	405.44 E
8205.00	2.28	135.02	S 44 59 E	0.00	8052.15	1285.2	161.6	1219.48 S	405.58 E
8210.00	2.28	135.09	S 44 55 E	0.01	8057.14	1285.3	161.6	1219.62 S	405.72 E
8215.00	2.28	134.57	S 45 26 E	0.02	8062.14	1285.5	161.6	1219.76 S	405.86 E
8220.00	2.28	134.80	S 45 12 E	0.01	8067.13	1285.7	161.6	1219.90 S	406.00 E
8225.00	2.28	135.14	S 44 52 E	0.01	8072.13	1285.9	161.6	1220.04 S	406.14 E
8230.00	2.29	135.36	S 44 38 E	0.01	8077.13	1286.0	161.6	1220.18 S	406.28 E
8235.00	2.28	135.16	S 44 50 E	0.01	8082.12	1286.2	161.6	1220.33 S	406.42 E
8240.00	2.28	135.66	S 44 20 E	0.02	8087.12	1286.4	161.6	1220.47 S	406.56 E
8245.00	2.27	135.87	S 44 8 E	0.01	8092.11	1286.6	161.6	1220.61 S	406.70 E
8250.00	2.28	135.68	S 44 19 E	0.01	8097.11	1286.8	161.6	1220.75 S	406.84 E
8255.00	2.28	135.24	S 44 46 E	0.02	8102.11	1286.9	161.6	1220.89 S	406.98 E
8260.00	2.28	135.41	S 44 35 E	0.01	8107.10	1287.1	161.6	1221.03 S	407.12 E
8265.00	2.27	135.38	S 44 37 E	0.01	8112.10	1287.3	161.6	1221.18 S	407.26 E
8270.00	2.27	135.30	S 44 42 E	0.00	8117.09	1287.5	161.6	1221.32 S	407.40 E
8275.00	2.27	135.48	S 44 31 E	0.01	8122.09	1287.7	161.5	1221.46 S	407.53 E
8280.00	2.26	135.95	S 44 3 E	0.02	8127.09	1287.8	161.5	1221.60 S	407.67 E
8285.00	2.25	135.66	S 44 21 E	0.02	8132.08	1288.0	161.5	1221.74 S	407.81 E
8290.00	2.25	135.87	S 44 8 E	0.01	8137.08	1288.2	161.5	1221.88 S	407.95 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
8295.00	2.23	136.20	S 43 48 E	0.02	8142.08	1288.4	161.5	1222.02 S	408.08 E
8300.00	2.20	136.25	S 43 45 E	0.03	8147.07	1288.5	161.5	1222.16 S	408.22 E
8305.00	2.13	136.49	S 43 31 E	0.07	8152.07	1288.7	161.5	1222.30 S	408.35 E
8310.00	2.00	137.12	S 42 53 E	0.12	8157.06	1288.9	161.5	1222.43 S	408.47 E
8315.00	1.82	137.92	S 42 5 E	0.18	8162.06	1289.0	161.5	1222.55 S	408.58 E
8320.00	1.61	139.26	S 40 44 E	0.22	8167.06	1289.2	161.5	1222.66 S	408.68 E
8325.00	1.39	141.11	S 38 53 E	0.22	8172.06	1289.3	161.5	1222.76 S	408.76 E
8330.00	1.16	144.50	S 35 30 E	0.24	8177.06	1289.4	161.5	1222.85 S	408.83 E
8335.00	0.85	151.36	S 28 39 E	0.33	8182.06	1289.5	161.5	1222.93 S	408.88 E
8340.00	0.50	171.66	S 8 20 E	0.42	8187.06	1289.5	161.5	1222.98 S	408.90 E
8345.00	0.33	223.05	S 43 3 W	0.39	8192.06	1289.6	161.5	1223.01 S	408.89 E
8350.00	0.43	257.42	S 77 25 W	0.24	8197.06	1289.6	161.5	1223.03 S	408.87 E
8355.00	0.48	266.48	S 86 29 W	0.09	8202.06	1289.6	161.5	1223.03 S	408.83 E
8360.00	0.50	271.48	N 88 31 W	0.05	8207.05	1289.5	161.5	1223.03 S	408.78 E
8365.00	0.51	274.09	N 85 55 W	0.02	8212.05	1289.5	161.5	1223.03 S	408.74 E
8370.00	0.53	275.90	N 84 6 W	0.03	8217.05	1289.5	161.5	1223.03 S	408.69 E
8375.00	0.53	277.66	N 82 20 W	0.02	8222.05	1289.5	161.5	1223.02 S	408.65 E
8380.00	0.53	277.61	N 82 23 W	0.00	8227.05	1289.5	161.5	1223.02 S	408.60 E
8385.00	0.54	277.33	N 82 40 W	0.01	8232.05	1289.4	161.5	1223.01 S	408.55 E
8390.00	0.55	276.93	N 83 4 W	0.01	8237.05	1289.4	161.5	1223.00 S	408.51 E
8395.00	0.56	276.96	N 83 2 W	0.01	8242.05	1289.4	161.5	1223.00 S	408.46 E
8400.00	0.58	275.58	N 84 25 W	0.02	8247.05	1289.4	161.5	1222.99 S	408.41 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
8405.00	0.59	273.68	N 86 19 W	0.02	8252.05	1289.4	161.5	1222.99 S	408.36 E
8410.00	0.58	271.97	N 88 2 W	0.02	8257.05	1289.3	161.5	1222.99 S	408.31 E
8415.00	0.58	270.96	N 89 3 W	0.01	8262.05	1289.3	161.5	1222.98 S	408.26 E
8420.00	0.58	271.38	N 88 37 W	0.01	8267.05	1289.3	161.5	1222.98 S	408.21 E
8425.00	0.58	271.34	N 88 40 W	0.00	8272.05	1289.3	161.5	1222.98 S	408.16 E
8430.00	0.58	270.55	N 89 27 W	0.01	8277.05	1289.3	161.5	1222.98 S	408.11 E
8435.00	0.60	270.33	N 89 40 W	0.01	8282.05	1289.3	161.5	1222.98 S	408.05 E
8440.00	0.61	271.24	N 88 46 W	0.02	8287.05	1289.2	161.6	1222.98 S	408.00 E
8445.00	0.62	272.44	N 87 33 W	0.02	8292.05	1289.2	161.6	1222.98 S	407.95 E
8450.00	0.61	273.69	N 86 19 W	0.02	8297.05	1289.2	161.6	1222.98 S	407.89 E
8455.00	0.61	274.60	N 85 24 W	0.01	8302.05	1289.2	161.6	1222.97 S	407.84 E
8460.00	0.61	274.44	N 85 34 W	0.00	8307.05	1289.2	161.6	1222.97 S	407.79 E
8465.00	0.60	273.23	N 86 46 W	0.01	8312.05	1289.1	161.6	1222.96 S	407.74 E
8470.00	0.61	271.81	N 88 12 W	0.02	8317.05	1289.1	161.6	1222.96 S	407.68 E
8475.00	0.59	270.49	N 89 31 W	0.02	8322.05	1289.1	161.6	1222.96 S	407.63 E
8480.00	0.59	268.96	S 88 58 W	0.02	8327.05	1289.1	161.6	1222.96 S	407.58 E
8485.00	0.59	267.99	S 88 0 W	0.01	8332.05	1289.1	161.6	1222.96 S	407.53 E
8490.00	0.59	263.74	S 83 44 W	0.04	8337.05	1289.1	161.6	1222.97 S	407.48 E
8495.00	0.58	261.77	S 81 46 W	0.02	8342.05	1289.1	161.6	1222.97 S	407.43 E
8500.00	0.58	260.03	S 80 2 W	0.02	8347.05	1289.0	161.6	1222.98 S	407.38 E
8505.00	0.59	257.76	S 77 46 W	0.02	8352.05	1289.0	161.6	1222.99 S	407.33 E
8510.00	0.60	254.54	S 74 33 W	0.04	8357.05	1289.0	161.6	1223.00 S	407.28 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
8515.00	0.60	251.41	S 71 24 W	0.03	8362.05	1289.0	161.6	1223.02 S	407.23 E
8520.00	0.62	247.82	S 67 49 W	0.04	8367.05	1289.0	161.6	1223.04 S	407.18 E
8525.00	0.63	246.33	S 66 20 W	0.02	8372.05	1289.0	161.6	1223.06 S	407.13 E
8530.00	0.65	247.31	S 67 19 W	0.02	8377.05	1289.0	161.6	1223.08 S	407.08 E
8535.00	0.67	246.73	S 66 44 W	0.02	8382.05	1289.0	161.6	1223.10 S	407.02 E
8540.00	0.69	244.60	S 64 36 W	0.03	8387.05	1289.1	161.6	1223.13 S	406.97 E
8545.00	0.70	242.39	S 62 24 W	0.03	8392.04	1289.1	161.6	1223.15 S	406.91 E
8550.00	0.71	240.31	S 60 18 W	0.03	8397.04	1289.1	161.6	1223.18 S	406.86 E
8555.00	0.69	238.44	S 58 27 W	0.03	8402.04	1289.1	161.6	1223.21 S	406.81 E
8560.00	0.67	237.33	S 57 20 W	0.02	8407.04	1289.1	161.6	1223.25 S	406.76 E
8565.00	0.67	237.62	S 57 37 W	0.01	8412.04	1289.1	161.6	1223.28 S	406.71 E
8570.00	0.67	238.31	S 58 18 W	0.01	8417.04	1289.1	161.6	1223.31 S	406.66 E
8575.00	0.69	238.73	S 58 44 W	0.02	8422.04	1289.1	161.6	1223.34 S	406.61 E
8580.00	0.69	237.18	S 57 11 W	0.02	8427.04	1289.2	161.6	1223.37 S	406.56 E
8585.00	0.70	234.79	S 54 47 W	0.03	8432.04	1289.2	161.6	1223.41 S	406.51 E
8590.00	0.71	233.01	S 53 1 W	0.02	8437.04	1289.2	161.6	1223.44 S	406.46 E
8595.00	0.71	230.46	S 50 27 W	0.03	8442.04	1289.2	161.6	1223.48 S	406.41 E
8600.00	0.70	227.77	S 47 46 W	0.04	8447.04	1289.2	161.6	1223.52 S	406.36 E
8605.00	0.70	224.23	S 44 14 W	0.04	8452.04	1289.3	161.6	1223.56 S	406.32 E
8610.00	0.69	220.57	S 40 34 W	0.04	8457.04	1289.3	161.6	1223.61 S	406.28 E
8615.00	0.71	217.91	S 37 55 W	0.04	8462.04	1289.3	161.6	1223.65 S	406.24 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
8620.00	0.72	215.47	S 35 28 W	0.03	8467.04	1289.4	161.6	1223.70 S	406.20 E
8625.00	0.73	214.03	S 34 2 W	0.02	8472.04	1289.4	161.6	1223.76 S	406.17 E
8630.00	0.74	213.35	S 33 21 W	0.01	8477.04	1289.4	161.6	1223.81 S	406.13 E
8635.00	0.75	213.18	S 33 11 W	0.01	8482.04	1289.5	161.6	1223.86 S	406.09 E
8640.00	0.75	212.61	S 32 37 W	0.01	8487.04	1289.5	161.6	1223.92 S	406.06 E
8645.00	0.76	212.84	S 32 51 W	0.00	8492.04	1289.6	161.6	1223.97 S	406.02 E
8650.00	0.74	214.00	S 34 0 W	0.02	8497.04	1289.6	161.7	1224.03 S	405.99 E
8655.00	0.74	213.37	S 33 22 W	0.01	8502.04	1289.6	161.7	1224.08 S	405.95 E
8660.00	0.74	212.63	S 32 38 W	0.01	8507.04	1289.7	161.7	1224.14 S	405.92 E
8665.00	0.73	211.59	S 31 35 W	0.01	8512.04	1289.7	161.7	1224.19 S	405.88 E
8670.00	0.73	210.20	S 30 12 W	0.02	8517.04	1289.8	161.7	1224.25 S	405.85 E
8675.00	0.72	209.45	S 29 27 W	0.01	8522.03	1289.8	161.7	1224.30 S	405.82 E
8680.00	0.72	208.73	S 28 44 W	0.01	8527.03	1289.8	161.7	1224.36 S	405.79 E
8685.00	0.71	207.16	S 27 9 W	0.02	8532.03	1289.9	161.7	1224.41 S	405.76 E
8690.00	0.71	208.14	S 28 8 W	0.01	8537.03	1289.9	161.7	1224.47 S	405.73 E
8695.00	0.70	209.71	S 29 42 W	0.02	8542.03	1290.0	161.7	1224.52 S	405.70 E
8700.00	0.72	209.88	S 29 53 W	0.01	8547.03	1290.0	161.7	1224.57 S	405.67 E
8705.00	0.72	209.68	S 29 41 W	0.00	8552.03	1290.1	161.7	1224.63 S	405.64 E
8710.00	0.72	209.12	S 29 7 W	0.01	8557.03	1290.1	161.7	1224.68 S	405.61 E
8715.00	0.72	208.01	S 28 0 W	0.01	8562.03	1290.1	161.7	1224.74 S	405.58 E
8720.00	0.73	208.46	S 28 28 W	0.01	8567.03	1290.2	161.7	1224.79 S	405.55 E
8725.00	0.74	208.36	S 28 22 W	0.01	8572.03	1290.2	161.7	1224.85 S	405.52 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
8730.00	0.74	208.63	S 28 38 W	0.01	8577.03	1290.3	161.7	1224.91 S	405.49 E
8735.00	0.74	208.10	S 28 6 W	0.01	8582.03	1290.3	161.7	1224.96 S	405.45 E
8740.00	0.72	206.24	S 26 14 W	0.03	8587.03	1290.4	161.7	1225.02 S	405.43 E
8745.00	0.72	205.79	S 25 47 W	0.01	8592.03	1290.4	161.7	1225.08 S	405.40 E
8750.00	0.70	206.30	S 26 18 W	0.02	8597.03	1290.5	161.7	1225.13 S	405.37 E
8755.00	0.68	206.42	S 26 25 W	0.03	8602.03	1290.5	161.7	1225.19 S	405.34 E
8760.00	0.67	206.15	S 26 9 W	0.01	8607.03	1290.5	161.7	1225.24 S	405.32 E
8765.00	0.67	204.91	S 24 54 W	0.01	8612.03	1290.6	161.7	1225.29 S	405.29 E
8770.00	0.67	205.07	S 25 4 W	0.00	8617.03	1290.6	161.7	1225.34 S	405.27 E
8775.00	0.65	205.82	S 25 49 W	0.02	8622.03	1290.7	161.7	1225.40 S	405.24 E
8780.00	0.63	208.89	S 28 54 W	0.04	8627.03	1290.7	161.7	1225.45 S	405.22 E
8785.00	0.62	209.32	S 29 19 W	0.01	8632.03	1290.7	161.7	1225.49 S	405.19 E
8790.00	0.60	208.78	S 28 47 W	0.02	8637.03	1290.8	161.7	1225.54 S	405.17 E
8795.00	0.58	207.77	S 27 46 W	0.02	8642.03	1290.8	161.7	1225.58 S	405.14 E
8800.00	0.56	205.26	S 25 16 W	0.03	8647.03	1290.8	161.7	1225.63 S	405.12 E
8805.00	0.54	200.65	S 20 39 W	0.05	8652.03	1290.9	161.7	1225.67 S	405.10 E
8810.00	0.53	193.85	S 13 51 W	0.06	8657.03	1290.9	161.7	1225.72 S	405.09 E
8815.00	0.53	187.22	S 7 13 W	0.06	8662.03	1291.0	161.7	1225.76 S	405.08 E
8820.00	0.55	181.42	S 1 25 W	0.06	8667.02	1291.0	161.7	1225.81 S	405.08 E
8825.00	0.58	179.09	S 0 55 E	0.03	8672.02	1291.1	161.7	1225.86 S	405.07 E
8830.00	0.59	179.99	S 0 1 E	0.02	8677.02	1291.1	161.7	1225.91 S	405.08 E
8835.00	0.61	179.38	S 0 37 E	0.02	8682.02	1291.2	161.7	1225.96 S	405.08 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
8840.00	0.61	178.56	S 1 26 E	0.01	8687.02	1291.2	161.7	1226.02 S	405.08 E
8845.00	0.62	177.69	S 2 19 E	0.01	8692.02	1291.3	161.7	1226.07 S	405.08 E
8850.00	0.63	175.80	S 4 12 E	0.02	8697.02	1291.3	161.7	1226.12 S	405.08 E
8855.00	0.63	175.40	S 4 36 E	0.00	8702.02	1291.4	161.7	1226.18 S	405.09 E
8860.00	0.63	175.03	S 4 58 E	0.01	8707.02	1291.4	161.7	1226.23 S	405.09 E
8865.00	0.65	176.52	S 3 29 E	0.02	8712.02	1291.5	161.7	1226.29 S	405.09 E
8870.00	0.65	176.02	S 3 59 E	0.01	8717.02	1291.5	161.7	1226.35 S	405.10 E
8875.00	0.65	174.99	S 5 0 E	0.01	8722.02	1291.6	161.7	1226.40 S	405.10 E
8880.00	0.64	174.07	S 5 56 E	0.01	8727.02	1291.6	161.7	1226.46 S	405.11 E
8885.00	0.64	173.86	S 6 8 E	0.00	8732.02	1291.7	161.7	1226.51 S	405.11 E
8890.00	0.66	172.47	S 7 32 E	0.02	8737.02	1291.7	161.7	1226.57 S	405.12 E
8895.00	0.65	169.48	S 10 31 E	0.03	8742.02	1291.8	161.7	1226.63 S	405.13 E
8900.00	0.68	168.29	S 11 43 E	0.03	8747.02	1291.9	161.7	1226.68 S	405.14 E
8905.00	0.71	168.78	S 11 13 E	0.04	8752.02	1291.9	161.7	1226.74 S	405.15 E
8910.00	0.73	168.95	S 11 3 E	0.02	8757.02	1292.0	161.7	1226.81 S	405.16 E
8915.00	0.74	168.04	S 11 58 E	0.02	8762.02	1292.0	161.7	1226.87 S	405.18 E
8920.00	0.75	168.60	S 11 24 E	0.01	8767.02	1292.1	161.7	1226.93 S	405.19 E
8925.00	0.75	168.48	S 11 32 E	0.00	8772.02	1292.2	161.7	1227.00 S	405.20 E
8930.00	0.75	168.32	S 11 41 E	0.00	8777.02	1292.2	161.7	1227.06 S	405.22 E
8935.00	0.75	167.41	S 12 35 E	0.01	8782.02	1292.3	161.7	1227.12 S	405.23 E
8940.00	0.76	166.50	S 13 30 E	0.01	8787.02	1292.4	161.7	1227.19 S	405.25 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
8945.00	0.78	166.18	S 13 49 E	0.02	8792.02	1292.4	161.7	1227.25 S	405.26 E
8950.00	0.77	166.26	S 13 45 E	0.00	8797.02	1292.5	161.7	1227.32 S	405.28 E
8955.00	0.78	166.06	S 13 57 E	0.01	8802.02	1292.6	161.7	1227.39 S	405.29 E
8960.00	0.80	166.04	S 13 58 E	0.02	8807.01	1292.6	161.7	1227.45 S	405.31 E
8965.00	0.80	165.89	S 14 7 E	0.01	8812.01	1292.7	161.7	1227.52 S	405.33 E
8970.00	0.81	164.96	S 15 2 E	0.01	8817.01	1292.8	161.7	1227.59 S	405.35 E
8975.00	0.82	163.19	S 16 49 E	0.03	8822.01	1292.9	161.7	1227.66 S	405.36 E
8980.00	0.83	161.48	S 18 31 E	0.03	8827.01	1292.9	161.7	1227.72 S	405.39 E
8985.00	0.86	160.02	S 19 59 E	0.04	8832.01	1293.0	161.7	1227.79 S	405.41 E
8990.00	0.87	158.33	S 21 40 E	0.03	8837.01	1293.1	161.7	1227.86 S	405.44 E
8995.00	0.87	157.54	S 22 27 E	0.02	8842.01	1293.1	161.7	1227.93 S	405.47 E
9000.00	0.88	156.82	S 23 11 E	0.01	8847.01	1293.2	161.7	1228.01 S	405.50 E
9005.00	0.90	156.86	S 23 8 E	0.02	8852.01	1293.3	161.7	1228.08 S	405.53 E
9010.00	0.90	157.11	S 22 54 E	0.01	8857.01	1293.4	161.7	1228.15 S	405.56 E
9015.00	0.90	156.94	S 23 4 E	0.00	8862.01	1293.5	161.7	1228.22 S	405.59 E
9020.00	0.90	155.85	S 24 9 E	0.02	8867.01	1293.5	161.7	1228.29 S	405.62 E
9025.00	0.90	154.65	S 25 21 E	0.02	8872.01	1293.6	161.7	1228.37 S	405.65 E
9030.00	0.92	155.10	S 24 54 E	0.01	8877.01	1293.7	161.7	1228.44 S	405.69 E
9035.00	0.92	154.39	S 25 37 E	0.01	8882.01	1293.8	161.7	1228.51 S	405.72 E
9040.00	0.95	153.82	S 26 11 E	0.03	8887.01	1293.9	161.7	1228.58 S	405.76 E
9045.00	0.97	153.99	S 26 0 E	0.02	8892.00	1293.9	161.7	1228.66 S	405.79 E
9050.00	0.98	154.47	S 25 32 E	0.01	8897.00	1294.0	161.7	1228.74 S	405.83 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
9055.00	0.99	155.26	S 24 45 E	0.02	8902.00	1294.1	161.7	1228.81 S	405.87 E
9060.00	0.99	154.07	S 25 56 E	0.02	8907.00	1294.2	161.7	1228.89 S	405.90 E
9065.00	1.00	153.51	S 26 30 E	0.01	8912.00	1294.3	161.7	1228.97 S	405.94 E
9070.00	1.01	153.15	S 26 51 E	0.02	8917.00	1294.4	161.7	1229.05 S	405.98 E
9075.00	1.03	152.66	S 27 20 E	0.02	8922.00	1294.5	161.7	1229.13 S	406.02 E
9080.00	1.05	152.99	S 27 0 E	0.02	8927.00	1294.5	161.7	1229.21 S	406.06 E
9085.00	1.06	152.41	S 27 35 E	0.01	8932.00	1294.6	161.7	1229.29 S	406.11 E
9090.00	1.08	152.32	S 27 41 E	0.02	8937.00	1294.7	161.7	1229.37 S	406.15 E
9095.00	1.07	152.58	S 27 25 E	0.01	8942.00	1294.8	161.7	1229.46 S	406.19 E
9100.00	1.04	152.92	S 27 5 E	0.03	8947.00	1294.9	161.7	1229.54 S	406.23 E
9105.00	1.01	152.21	S 27 48 E	0.03	8952.00	1295.0	161.7	1229.62 S	406.28 E
9110.00	0.98	150.42	S 29 35 E	0.04	8956.99	1295.1	161.7	1229.69 S	406.32 E
9115.00	0.98	149.66	S 30 20 E	0.01	8961.99	1295.2	161.7	1229.77 S	406.36 E
9120.00	0.98	150.17	S 29 50 E	0.01	8966.99	1295.2	161.7	1229.84 S	406.40 E
9125.00	1.00	150.56	S 29 27 E	0.02	8971.99	1295.3	161.7	1229.92 S	406.45 E
9130.00	1.01	150.29	S 29 42 E	0.02	8976.99	1295.4	161.7	1229.99 S	406.49 E
9135.00	1.03	149.54	S 30 27 E	0.02	8981.99	1295.5	161.7	1230.07 S	406.53 E
9140.00	1.03	147.91	S 32 5 E	0.03	8986.99	1295.6	161.7	1230.15 S	406.58 E
9145.00	1.06	146.50	S 33 30 E	0.04	8991.99	1295.7	161.7	1230.22 S	406.63 E
9150.00	1.09	144.54	S 35 27 E	0.05	8996.99	1295.8	161.7	1230.30 S	406.68 E
9155.00	1.12	142.77	S 37 14 E	0.04	9001.99	1295.9	161.7	1230.38 S	406.74 E
9160.00	1.11	140.78	S 39 13 E	0.04	9006.99	1296.0	161.7	1230.45 S	406.80 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
9165.00	1.11	139.64	S 40 22 E	0.02	9011.99	1296.0	161.7	1230.53 S	406.86 E
9170.00	1.12	138.89	S 41 7 E	0.02	9016.98	1296.1	161.7	1230.60 S	406.93 E
9175.00	1.14	138.91	S 41 5 E	0.01	9021.98	1296.2	161.7	1230.68 S	406.99 E
9180.00	1.15	139.06	S 40 57 E	0.02	9026.98	1296.3	161.7	1230.75 S	407.06 E
9185.00	1.17	139.94	S 40 4 E	0.02	9031.98	1296.4	161.7	1230.83 S	407.12 E
9190.00	1.16	140.96	S 39 2 E	0.02	9036.98	1296.5	161.7	1230.91 S	407.19 E
9195.00	1.15	140.80	S 39 12 E	0.02	9041.98	1296.6	161.7	1230.99 S	407.25 E
9200.00	1.14	140.55	S 39 27 E	0.01	9046.98	1296.7	161.7	1231.06 S	407.31 E
9205.00	1.14	140.16	S 39 51 E	0.01	9051.98	1296.8	161.7	1231.14 S	407.38 E
9210.00	1.14	140.38	S 39 37 E	0.00	9056.98	1296.9	161.7	1231.21 S	407.44 E
9215.00	1.12	140.42	S 39 35 E	0.01	9061.98	1297.0	161.7	1231.29 S	407.50 E
9220.00	1.11	139.72	S 40 17 E	0.02	9066.97	1297.1	161.7	1231.37 S	407.56 E
9225.00	1.09	137.84	S 42 10 E	0.04	9071.97	1297.2	161.7	1231.44 S	407.63 E
9230.00	1.07	136.95	S 43 3 E	0.03	9076.97	1297.2	161.7	1231.51 S	407.69 E
9235.00	1.09	136.63	S 43 22 E	0.02	9081.97	1297.3	161.7	1231.58 S	407.76 E
9240.00	1.12	137.30	S 42 42 E	0.03	9086.97	1297.4	161.7	1231.65 S	407.82 E
9245.00	1.13	136.56	S 43 27 E	0.02	9091.97	1297.5	161.7	1231.72 S	407.89 E
9250.00	1.14	136.64	S 43 21 E	0.01	9096.97	1297.6	161.7	1231.79 S	407.96 E
9255.00	1.16	137.19	S 42 49 E	0.02	9101.97	1297.7	161.7	1231.86 S	408.03 E
9260.00	1.17	137.01	S 43 0 E	0.01	9106.97	1297.8	161.7	1231.94 S	408.09 E
9265.00	1.16	136.74	S 43 15 E	0.01	9111.97	1297.9	161.7	1232.01 S	408.16 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
9270.00	1.15	135.74	S 44 15 E	0.02	9116.96	1298.0	161.7	1232.09 S	408.23 E
9275.00	1.13	135.29	S 44 43 E	0.03	9121.96	1298.0	161.7	1232.16 S	408.30 E
9280.00	1.14	135.13	S 44 52 E	0.01	9126.96	1298.1	161.7	1232.23 S	408.37 E
9285.00	1.13	135.35	S 44 39 E	0.01	9131.96	1298.2	161.7	1232.30 S	408.44 E
9290.00	1.12	134.99	S 45 0 E	0.01	9136.96	1298.3	161.7	1232.37 S	408.51 E
9295.00	1.12	134.32	S 45 41 E	0.01	9141.96	1298.4	161.7	1232.43 S	408.58 E
9300.00	1.14	132.78	S 47 13 E	0.03	9146.96	1298.5	161.7	1232.50 S	408.65 E
9305.00	1.17	131.35	S 48 39 E	0.04	9151.96	1298.6	161.7	1232.57 S	408.73 E
9310.00	1.22	129.87	S 50 8 E	0.05	9156.96	1298.7	161.7	1232.64 S	408.81 E
9315.00	1.25	129.87	S 50 8 E	0.03	9161.96	1298.8	161.6	1232.71 S	408.89 E
9320.00	1.26	129.89	S 50 7 E	0.01	9166.95	1298.8	161.6	1232.78 S	408.97 E
9325.00	1.27	130.59	S 49 24 E	0.02	9171.95	1298.9	161.6	1232.85 S	409.06 E
9330.00	1.29	130.96	S 49 3 E	0.02	9176.95	1299.0	161.6	1232.92 S	409.14 E
9335.00	1.30	131.31	S 48 41 E	0.01	9181.95	1299.1	161.6	1233.00 S	409.23 E
9340.00	1.30	131.95	S 48 3 E	0.02	9186.95	1299.2	161.6	1233.07 S	409.31 E
9345.00	1.29	131.35	S 48 39 E	0.01	9191.95	1299.3	161.6	1233.15 S	409.40 E
9350.00	1.32	131.21	S 48 48 E	0.02	9196.95	1299.4	161.6	1233.22 S	409.48 E
9355.00	1.33	130.06	S 49 56 E	0.03	9201.95	1299.5	161.6	1233.30 S	409.57 E
9360.00	1.34	129.86	S 50 8 E	0.02	9206.94	1299.6	161.6	1233.37 S	409.66 E
9365.00	1.35	130.26	S 49 44 E	0.01	9211.94	1299.7	161.6	1233.45 S	409.75 E
9370.00	1.36	130.12	S 49 53 E	0.01	9216.94	1299.8	161.6	1233.52 S	409.84 E
9375.00	1.38	129.75	S 50 15 E	0.02	9221.94	1299.9	161.6	1233.60 S	409.93 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
9380.00	1.40	130.03	S 49 58 E	0.02	9226.94	1300.0	161.6	1233.68 S	410.02 E
9385.00	1.42	130.90	S 49 6 E	0.03	9231.94	1300.1	161.6	1233.76 S	410.12 E
9390.00	1.43	131.06	S 48 56 E	0.01	9236.94	1300.2	161.6	1233.84 S	410.21 E
9395.00	1.43	130.34	S 49 39 E	0.02	9241.93	1300.4	161.6	1233.92 S	410.31 E
9400.00	1.44	130.45	S 49 33 E	0.01	9246.93	1300.5	161.6	1234.00 S	410.40 E
9405.00	1.47	130.30	S 49 42 E	0.03	9251.93	1300.6	161.6	1234.08 S	410.50 E
9410.00	1.48	130.22	S 49 47 E	0.01	9256.93	1300.7	161.6	1234.17 S	410.60 E
9415.00	1.50	130.05	S 49 57 E	0.02	9261.93	1300.8	161.6	1234.25 S	410.70 E
9420.00	1.50	130.25	S 49 45 E	0.01	9266.93	1300.9	161.6	1234.34 S	410.80 E
9425.00	1.51	129.58	S 50 25 E	0.02	9271.92	1301.0	161.6	1234.42 S	410.90 E
9430.00	1.52	129.31	S 50 41 E	0.02	9276.92	1301.1	161.6	1234.50 S	411.00 E
9435.00	1.55	129.61	S 50 23 E	0.03	9281.92	1301.2	161.6	1234.59 S	411.10 E
9440.00	1.59	130.67	S 49 20 E	0.05	9286.92	1301.4	161.6	1234.68 S	411.21 E
9445.00	1.61	131.00	S 49 0 E	0.02	9291.92	1301.5	161.6	1234.77 S	411.31 E
9450.00	1.61	130.73	S 49 16 E	0.01	9296.91	1301.6	161.6	1234.86 S	411.42 E
9455.00	1.60	130.11	S 49 53 E	0.02	9301.91	1301.7	161.6	1234.95 S	411.53 E
9460.00	1.60	130.08	S 49 55 E	0.01	9306.91	1301.8	161.6	1235.04 S	411.63 E
9465.00	1.60	129.87	S 50 8 E	0.01	9311.91	1302.0	161.6	1235.13 S	411.74 E
9470.00	1.61	129.89	S 50 7 E	0.02	9316.91	1302.1	161.6	1235.22 S	411.85 E
9475.00	1.62	129.94	S 50 4 E	0.01	9321.90	1302.2	161.6	1235.31 S	411.95 E
9480.00	1.64	129.18	S 50 49 E	0.03	9326.90	1302.3	161.6	1235.40 S	412.06 E
9485.00	1.65	128.26	S 51 44 E	0.03	9331.90	1302.4	161.6	1235.49 S	412.18 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
9490.00	1.67	127.36	S 52 38 E	0.03	9336.90	1302.6	161.5	1235.58 S	412.29 E
9495.00	1.68	127.40	S 52 36 E	0.01	9341.90	1302.7	161.5	1235.67 S	412.41 E
9500.00	1.67	126.96	S 53 3 E	0.02	9346.89	1302.8	161.5	1235.76 S	412.52 E
9505.00	1.67	126.84	S 53 10 E	0.01	9351.89	1302.9	161.5	1235.84 S	412.64 E
9510.00	1.69	126.36	S 53 38 E	0.02	9356.89	1303.0	161.5	1235.93 S	412.76 E
9515.00	1.71	125.89	S 54 7 E	0.03	9361.89	1303.2	161.5	1236.02 S	412.88 E
9520.00	1.73	125.57	S 54 26 E	0.03	9366.89	1303.3	161.5	1236.11 S	413.00 E
9525.00	1.72	125.13	S 54 52 E	0.02	9371.88	1303.4	161.5	1236.19 S	413.12 E
9530.00	1.71	125.14	S 54 51 E	0.00	9376.88	1303.5	161.5	1236.28 S	413.24 E
9535.00	1.71	125.72	S 54 17 E	0.02	9381.88	1303.6	161.5	1236.37 S	413.37 E
9540.00	1.71	126.16	S 53 50 E	0.01	9386.88	1303.8	161.5	1236.45 S	413.49 E
9545.00	1.71	126.67	S 53 20 E	0.02	9391.87	1303.9	161.5	1236.54 S	413.61 E
9550.00	1.71	126.68	S 53 19 E	0.00	9396.87	1304.0	161.5	1236.63 S	413.73 E
9555.00	1.70	125.96	S 54 3 E	0.02	9401.87	1304.1	161.5	1236.72 S	413.85 E
9560.00	1.71	125.33	S 54 40 E	0.02	9406.87	1304.2	161.5	1236.81 S	413.97 E
9565.00	1.73	125.79	S 54 13 E	0.03	9411.87	1304.4	161.5	1236.89 S	414.09 E
9570.00	1.72	125.88	S 54 7 E	0.01	9416.86	1304.5	161.5	1236.98 S	414.21 E
9575.00	1.72	126.07	S 53 56 E	0.01	9421.86	1304.6	161.5	1237.07 S	414.33 E
9580.00	1.72	125.93	S 54 4 E	0.00	9426.86	1304.7	161.5	1237.16 S	414.45 E
9585.00	1.73	125.51	S 54 29 E	0.02	9431.86	1304.9	161.5	1237.25 S	414.58 E
9590.00	1.74	125.26	S 54 44 E	0.01	9436.85	1305.0	161.5	1237.33 S	414.70 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
9595.00	1.76	125.32	S 54 41 E	0.02	9441.85	1305.1	161.5	1237.42 S	414.82 E
9600.00	1.76	125.43	S 54 34 E	0.00	9446.85	1305.2	161.5	1237.51 S	414.95 E
9605.00	1.76	125.52	S 54 29 E	0.01	9451.85	1305.4	161.5	1237.60 S	415.07 E
9610.00	1.78	126.03	S 53 58 E	0.03	9456.84	1305.5	161.5	1237.69 S	415.20 E
9615.00	1.80	125.62	S 54 23 E	0.02	9461.84	1305.6	161.5	1237.78 S	415.33 E
9620.00	1.81	125.47	S 54 32 E	0.01	9466.84	1305.7	161.4	1237.87 S	415.45 E
9625.00	1.81	125.17	S 54 50 E	0.01	9471.84	1305.9	161.4	1237.96 S	415.58 E
9630.00	1.81	124.81	S 55 11 E	0.01	9476.83	1306.0	161.4	1238.06 S	415.71 E
9635.00	1.83	124.81	S 55 11 E	0.02	9481.83	1306.1	161.4	1238.15 S	415.84 E
9640.00	1.81	125.27	S 54 44 E	0.03	9486.83	1306.2	161.4	1238.24 S	415.97 E
9645.00	1.85	124.91	S 55 5 E	0.04	9491.83	1306.4	161.4	1238.33 S	416.10 E
9650.00	1.86	124.98	S 55 1 E	0.01	9496.82	1306.5	161.4	1238.42 S	416.24 E
9655.00	1.87	125.21	S 54 48 E	0.02	9501.82	1306.6	161.4	1238.52 S	416.37 E
9660.00	1.88	125.52	S 54 29 E	0.01	9506.82	1306.8	161.4	1238.61 S	416.50 E
9665.00	1.88	125.42	S 54 35 E	0.00	9511.82	1306.9	161.4	1238.71 S	416.64 E
9670.00	1.88	125.79	S 54 13 E	0.01	9516.81	1307.0	161.4	1238.80 S	416.77 E
9675.00	1.88	125.47	S 54 32 E	0.01	9521.81	1307.2	161.4	1238.90 S	416.90 E
9680.00	1.87	125.05	S 54 57 E	0.02	9526.81	1307.3	161.4	1238.99 S	417.04 E
9685.00	1.90	125.03	S 54 58 E	0.04	9531.81	1307.4	161.4	1239.09 S	417.17 E
9690.00	1.90	124.57	S 55 26 E	0.02	9536.80	1307.6	161.4	1239.18 S	417.31 E
9695.00	1.92	124.22	S 55 47 E	0.02	9541.80	1307.7	161.4	1239.27 S	417.45 E
9700.00	1.92	124.29	S 55 43 E	0.00	9546.80	1307.8	161.4	1239.37 S	417.58 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
9705.00	1.93	124.02	S 55 59 E	0.01	9551.79	1308.0	161.4	1239.46 S	417.72 E
9710.00	1.93	123.18	S 56 49 E	0.03	9556.79	1308.1	161.4	1239.56 S	417.86 E
9715.00	1.94	122.53	S 57 28 E	0.02	9561.79	1308.2	161.4	1239.65 S	418.01 E
9720.00	1.95	122.22	S 57 47 E	0.02	9566.79	1308.4	161.4	1239.74 S	418.15 E
9725.00	1.98	121.67	S 58 20 E	0.03	9571.78	1308.5	161.4	1239.83 S	418.29 E
9730.00	2.02	121.82	S 58 11 E	0.05	9576.78	1308.6	161.4	1239.92 S	418.44 E
9735.00	2.02	121.39	S 58 37 E	0.02	9581.78	1308.8	161.3	1240.01 S	418.59 E
9740.00	2.02	121.18	S 58 49 E	0.01	9586.77	1308.9	161.3	1240.10 S	418.74 E
9745.00	2.03	121.18	S 58 49 E	0.01	9591.77	1309.0	161.3	1240.20 S	418.89 E
9750.00	2.03	121.27	S 58 44 E	0.00	9596.77	1309.2	161.3	1240.29 S	419.04 E
9755.00	2.03	121.83	S 58 10 E	0.02	9601.76	1309.3	161.3	1240.38 S	419.20 E
9760.00	2.04	121.75	S 58 15 E	0.01	9606.76	1309.4	161.3	1240.47 S	419.35 E
9765.00	2.03	121.34	S 58 40 E	0.02	9611.76	1309.6	161.3	1240.57 S	419.50 E
9770.00	2.06	121.89	S 58 7 E	0.04	9616.76	1309.7	161.3	1240.66 S	419.65 E
9775.00	2.08	121.37	S 58 38 E	0.03	9621.75	1309.8	161.3	1240.75 S	419.80 E
9780.00	2.07	120.88	S 59 7 E	0.02	9626.75	1310.0	161.3	1240.85 S	419.96 E
9785.00	2.07	120.87	S 59 8 E	0.01	9631.75	1310.1	161.3	1240.94 S	420.11 E
9790.00	2.07	120.40	S 59 36 E	0.02	9636.74	1310.3	161.3	1241.03 S	420.27 E
9795.00	2.07	120.26	S 59 45 E	0.01	9641.74	1310.4	161.3	1241.12 S	420.42 E
9800.00	2.09	120.07	S 59 56 E	0.02	9646.74	1310.5	161.3	1241.22 S	420.58 E
9805.00	2.12	120.15	S 59 51 E	0.03	9651.73	1310.7	161.3	1241.31 S	420.74 E
9810.00	2.14	119.90	S 60 6 E	0.02	9656.73	1310.8	161.3	1241.40 S	420.90 E

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API Well Number: 4304752316000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
9815.00	2.15	119.54	S 60 28 E	0.01	9661.73	1311.0	161.3	1241.49 S	421.06 E
9820.00	2.14	118.30	S 61 42 E	0.05	9666.72	1311.1	161.3	1241.58 S	421.23 E
9825.00	2.16	117.87	S 62 8 E	0.03	9671.72	1311.2	161.3	1241.67 S	421.39 E
9830.00	2.18	117.70	S 62 18 E	0.02	9676.71	1311.4	161.2	1241.76 S	421.56 E
9835.00	2.19	117.67	S 62 20 E	0.01	9681.71	1311.5	161.2	1241.85 S	421.73 E
9840.00	2.20	117.56	S 62 26 E	0.01	9686.71	1311.6	161.2	1241.94 S	421.90 E
9845.00	2.23	117.72	S 62 17 E	0.03	9691.70	1311.8	161.2	1242.03 S	422.07 E
9850.00	2.27	117.60	S 62 24 E	0.04	9696.70	1311.9	161.2	1242.12 S	422.24 E
9855.00	2.32	117.74	S 62 16 E	0.05	9701.70	1312.1	161.2	1242.21 S	422.42 E
9860.00	2.32	118.02	S 61 59 E	0.01	9706.69	1312.2	161.2	1242.31 S	422.60 E
9865.00	2.31	117.77	S 62 14 E	0.01	9711.69	1312.4	161.2	1242.40 S	422.78 E
9870.00	2.32	117.38	S 62 37 E	0.02	9716.68	1312.5	161.2	1242.49 S	422.96 E
9875.00	2.33	116.79	S 63 12 E	0.03	9721.68	1312.7	161.2	1242.59 S	423.14 E
9880.00	2.36	116.42	S 63 35 E	0.04	9726.68	1312.8	161.2	1242.68 S	423.32 E
9885.00	2.37	116.27	S 63 44 E	0.01	9731.67	1312.9	161.2	1242.77 S	423.51 E
9890.00	2.37	115.80	S 64 12 E	0.02	9736.67	1313.1	161.2	1242.86 S	423.69 E
9895.00	2.37	115.98	S 64 1 E	0.01	9741.66	1313.2	161.2	1242.95 S	423.88 E
9900.00	2.37	116.09	S 63 55 E	0.01	9746.66	1313.4	161.2	1243.04 S	424.06 E
9905.00	2.37	116.26	S 63 44 E	0.01	9751.65	1313.5	161.2	1243.13 S	424.25 E
9910.00	2.38	116.16	S 63 51 E	0.01	9756.65	1313.7	161.2	1243.22 S	424.44 E
9915.00	2.39	115.59	S 64 24 E	0.03	9761.65	1313.8	161.1	1243.31 S	424.62 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
9920.00	2.40	116.05	S 63 57 E	0.02	9766.64	1314.0	161.1	1243.41 S	424.81 E
9925.00	2.40	116.34	S 63 40 E	0.01	9771.64	1314.1	161.1	1243.50 S	425.00 E
9930.00	2.41	116.12	S 63 53 E	0.01	9776.63	1314.3	161.1	1243.59 S	425.19 E
9935.00	2.42	116.33	S 63 40 E	0.01	9781.63	1314.4	161.1	1243.68 S	425.38 E
9940.00	2.42	115.96	S 64 2 E	0.02	9786.62	1314.6	161.1	1243.78 S	425.57 E
9945.00	2.39	115.80	S 64 12 E	0.03	9791.62	1314.7	161.1	1243.87 S	425.75 E
9950.00	2.40	116.13	S 63 52 E	0.02	9796.61	1314.9	161.1	1243.96 S	425.94 E
9955.00	2.39	116.09	S 63 55 E	0.01	9801.61	1315.0	161.1	1244.05 S	426.13 E
9960.00	2.38	116.55	S 63 27 E	0.02	9806.61	1315.2	161.1	1244.14 S	426.32 E
9965.00	2.36	117.44	S 62 34 E	0.04	9811.60	1315.3	161.1	1244.24 S	426.50 E
9970.00	2.35	118.13	S 61 52 E	0.03	9816.60	1315.5	161.1	1244.33 S	426.68 E
9975.00	2.33	118.84	S 61 9 E	0.04	9821.59	1315.6	161.1	1244.43 S	426.86 E
9980.00	2.29	119.47	S 60 32 E	0.04	9826.59	1315.8	161.1	1244.53 S	427.04 E
9985.00	2.27	118.92	S 61 5 E	0.03	9831.58	1315.9	161.1	1244.63 S	427.21 E
9990.00	2.24	119.47	S 60 32 E	0.04	9836.58	1316.1	161.0	1244.72 S	427.38 E
9995.00	2.22	119.82	S 60 11 E	0.02	9841.58	1316.2	161.0	1244.82 S	427.55 E
10000.00	2.21	120.40	S 59 36 E	0.03	9846.57	1316.3	161.0	1244.92 S	427.72 E
10005.00	2.20	120.27	S 59 44 E	0.01	9851.57	1316.5	161.0	1245.01 S	427.89 E
10010.00	2.21	119.88	S 60 7 E	0.02	9856.57	1316.6	161.0	1245.11 S	428.05 E
10015.00	2.23	119.55	S 60 27 E	0.02	9861.56	1316.8	161.0	1245.21 S	428.22 E
10020.00	2.23	119.23	S 60 46 E	0.01	9866.56	1316.9	161.0	1245.30 S	428.39 E
10025.00	2.24	119.89	S 60 7 E	0.03	9871.55	1317.1	161.0	1245.40 S	428.56 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
10030.00	2.24	119.94	S 60 4 E	0.01	9876.55	1317.2	161.0	1245.49 S	428.73 E
10035.00	2.25	120.32	S 59 41 E	0.02	9881.55	1317.4	161.0	1245.59 S	428.90 E
10040.00	2.26	120.62	S 59 23 E	0.01	9886.54	1317.5	161.0	1245.69 S	429.07 E
10045.00	2.26	120.82	S 59 11 E	0.01	9891.54	1317.7	161.0	1245.79 S	429.24 E
10050.00	2.26	120.87	S 59 8 E	0.00	9896.54	1317.8	161.0	1245.89 S	429.41 E
10055.00	2.25	120.91	S 59 5 E	0.01	9901.53	1318.0	161.0	1246.00 S	429.58 E
10060.00	2.26	121.84	S 58 10 E	0.04	9906.53	1318.1	161.0	1246.10 S	429.74 E
10065.00	2.26	123.16	S 56 51 E	0.05	9911.52	1318.3	161.0	1246.20 S	429.91 E
10070.00	2.26	123.76	S 56 15 E	0.02	9916.52	1318.4	161.0	1246.31 S	430.07 E
10075.00	2.28	123.91	S 56 5 E	0.02	9921.52	1318.6	161.0	1246.42 S	430.24 E
10080.00	2.27	123.74	S 56 16 E	0.02	9926.51	1318.7	161.0	1246.53 S	430.40 E
10085.00	2.25	123.15	S 56 51 E	0.03	9931.51	1318.9	160.9	1246.64 S	430.57 E
10090.00	2.24	123.01	S 57 0 E	0.01	9936.50	1319.1	160.9	1246.75 S	430.73 E
10095.00	2.25	123.08	S 56 55 E	0.01	9941.50	1319.2	160.9	1246.86 S	430.90 E
10100.00	2.29	123.76	S 56 15 E	0.04	9946.50	1319.4	160.9	1246.96 S	431.06 E
10105.00	2.31	124.78	S 55 13 E	0.05	9951.49	1319.5	160.9	1247.08 S	431.23 E
10110.00	2.29	124.15	S 55 51 E	0.03	9956.49	1319.7	160.9	1247.19 S	431.39 E
10115.00	2.28	123.97	S 56 2 E	0.02	9961.48	1319.9	160.9	1247.30 S	431.56 E
10120.00	2.26	123.73	S 56 16 E	0.02	9966.48	1320.0	160.9	1247.41 S	431.72 E
10125.00	2.24	124.30	S 55 42 E	0.03	9971.48	1320.2	160.9	1247.52 S	431.89 E
10130.00	2.23	124.72	S 55 17 E	0.02	9976.47	1320.3	160.9	1247.63 S	432.05 E
10135.00	2.22	124.74	S 55 16 E	0.01	9981.47	1320.5	160.9	1247.74 S	432.21 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
10140.00	2.22	124.24	S 55 45 E	0.02	9986.47	1320.6	160.9	1247.85 S	432.37 E
10145.00	2.26	123.57	S 56 26 E	0.04	9991.46	1320.8	160.9	1247.96 S	432.53 E
10150.00	2.27	122.28	S 57 43 E	0.05	9996.46	1320.9	160.9	1248.07 S	432.69 E
10155.00	2.28	122.55	S 57 27 E	0.01	10001.45	1321.1	160.9	1248.18 S	432.86 E
10160.00	2.27	122.77	S 57 14 E	0.01	10006.45	1321.3	160.9	1248.28 S	433.03 E
10165.00	2.25	122.87	S 57 8 E	0.02	10011.45	1321.4	160.9	1248.39 S	433.19 E
10170.00	2.23	123.18	S 56 49 E	0.02	10016.44	1321.6	160.9	1248.50 S	433.36 E
10175.00	2.21	123.84	S 56 9 E	0.03	10021.44	1321.7	160.9	1248.60 S	433.52 E
10180.00	2.17	124.39	S 55 36 E	0.05	10026.43	1321.9	160.8	1248.71 S	433.68 E
10185.00	2.13	124.84	S 55 10 E	0.04	10031.43	1322.0	160.8	1248.82 S	433.83 E
10190.00	2.09	125.23	S 54 46 E	0.05	10036.43	1322.2	160.8	1248.92 S	433.98 E
10195.00	2.06	124.97	S 55 2 E	0.02	10041.42	1322.3	160.8	1249.03 S	434.13 E
10200.00	2.04	124.85	S 55 9 E	0.02	10046.42	1322.5	160.8	1249.13 S	434.28 E
10205.00	2.03	124.72	S 55 17 E	0.01	10051.42	1322.6	160.8	1249.23 S	434.42 E
10210.00	2.03	124.69	S 55 18 E	0.00	10056.42	1322.8	160.8	1249.33 S	434.57 E
10215.00	2.03	125.04	S 54 57 E	0.01	10061.41	1322.9	160.8	1249.43 S	434.71 E
10220.00	2.01	124.90	S 55 6 E	0.03	10066.41	1323.0	160.8	1249.53 S	434.86 E
10225.00	1.97	123.99	S 56 1 E	0.05	10071.41	1323.2	160.8	1249.63 S	435.00 E
10230.00	1.94	123.02	S 56 59 E	0.05	10076.40	1323.3	160.8	1249.73 S	435.14 E
10235.00	1.92	122.76	S 57 15 E	0.02	10081.40	1323.4	160.8	1249.82 S	435.28 E
10240.00	1.92	122.87	S 57 8 E	0.00	10086.40	1323.6	160.8	1249.91 S	435.43 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
10245.00	1.92	122.53	S 57 28 E	0.01	10091.39	1323.7	160.8	1250.00 S	435.57 E
10250.00	1.91	122.09	S 57 55 E	0.02	10096.39	1323.8	160.8	1250.09 S	435.71 E
10255.00	1.92	121.95	S 58 3 E	0.01	10101.39	1324.0	160.8	1250.18 S	435.85 E
10260.00	1.93	122.04	S 57 57 E	0.01	10106.39	1324.1	160.8	1250.27 S	435.99 E
10265.00	1.94	122.46	S 57 32 E	0.02	10111.38	1324.2	160.8	1250.36 S	436.14 E
10270.00	1.99	123.26	S 56 45 E	0.06	10116.38	1324.4	160.8	1250.45 S	436.28 E
10275.00	2.02	123.52	S 56 29 E	0.04	10121.38	1324.5	160.8	1250.55 S	436.43 E
10280.00	2.08	123.66	S 56 20 E	0.06	10126.37	1324.7	160.8	1250.64 S	436.57 E
10285.00	2.12	123.93	S 56 4 E	0.04	10131.37	1324.8	160.8	1250.75 S	436.73 E
10290.00	2.14	123.59	S 56 25 E	0.02	10136.37	1324.9	160.7	1250.85 S	436.88 E
10295.00	2.15	122.59	S 57 25 E	0.04	10141.36	1325.1	160.7	1250.95 S	437.04 E
10300.00	2.15	122.00	S 58 0 E	0.02	10146.36	1325.2	160.7	1251.05 S	437.20 E
10305.00	2.12	120.95	S 59 3 E	0.05	10151.36	1325.4	160.7	1251.15 S	437.36 E
10310.00	2.07	119.77	S 60 14 E	0.07	10156.35	1325.5	160.7	1251.24 S	437.51 E
10315.00	2.02	118.81	S 61 11 E	0.07	10161.35	1325.7	160.7	1251.33 S	437.67 E
10320.00	2.02	118.21	S 61 47 E	0.02	10166.35	1325.8	160.7	1251.41 S	437.82 E
10325.00	2.02	118.06	S 61 57 E	0.01	10171.34	1325.9	160.7	1251.50 S	437.98 E
10330.00	2.01	117.86	S 62 9 E	0.01	10176.34	1326.1	160.7	1251.58 S	438.13 E
10335.00	2.01	117.37	S 62 38 E	0.02	10181.34	1326.2	160.7	1251.66 S	438.29 E
10340.00	2.00	117.18	S 62 49 E	0.01	10186.33	1326.3	160.7	1251.74 S	438.45 E
10345.00	1.99	116.60	S 63 24 E	0.02	10191.33	1326.4	160.7	1251.82 S	438.60 E
10350.00	2.01	116.59	S 63 24 E	0.03	10196.33	1326.6	160.7	1251.90 S	438.76 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
10355.00	2.07	116.38	S 63 37 E	0.06	10201.33	1326.7	160.7	1251.98 S	438.92 E
10360.00	2.13	116.60	S 63 24 E	0.06	10206.32	1326.8	160.7	1252.06 S	439.08 E
10365.00	2.14	116.29	S 63 43 E	0.01	10211.32	1326.9	160.7	1252.14 S	439.25 E
10370.00	2.14	115.92	S 64 5 E	0.01	10216.32	1327.1	160.7	1252.22 S	439.41 E
10375.00	2.14	115.98	S 64 1 E	0.00	10221.31	1327.2	160.7	1252.31 S	439.58 E
10380.00	2.14	115.67	S 64 20 E	0.01	10226.31	1327.3	160.7	1252.39 S	439.75 E
10385.00	2.14	115.51	S 64 30 E	0.01	10231.30	1327.5	160.6	1252.47 S	439.92 E
10390.00	2.16	115.13	S 64 52 E	0.02	10236.30	1327.6	160.6	1252.55 S	440.09 E
10395.00	2.16	115.06	S 64 56 E	0.00	10241.30	1327.7	160.6	1252.63 S	440.26 E
10400.00	2.16	115.43	S 64 34 E	0.01	10246.29	1327.9	160.6	1252.71 S	440.43 E
10405.00	2.17	115.37	S 64 38 E	0.01	10251.29	1328.0	160.6	1252.79 S	440.60 E
10410.00	2.18	115.61	S 64 23 E	0.01	10256.29	1328.1	160.6	1252.87 S	440.77 E
10415.00	2.19	115.74	S 64 16 E	0.01	10261.28	1328.3	160.6	1252.95 S	440.94 E
10420.00	2.19	115.74	S 64 16 E	0.00	10266.28	1328.4	160.6	1253.04 S	441.12 E
10425.00	2.19	115.70	S 64 18 E	0.00	10271.28	1328.5	160.6	1253.12 S	441.29 E
10430.00	2.20	116.24	S 63 46 E	0.02	10276.27	1328.7	160.6	1253.20 S	441.46 E
10435.00	2.19	116.87	S 63 8 E	0.03	10281.27	1328.8	160.6	1253.29 S	441.63 E
10440.00	2.18	117.01	S 62 59 E	0.01	10286.26	1329.0	160.6	1253.37 S	441.80 E
10445.00	2.17	116.41	S 63 35 E	0.02	10291.26	1329.1	160.6	1253.46 S	441.97 E
10450.00	2.18	115.62	S 64 23 E	0.03	10296.26	1329.2	160.6	1253.54 S	442.14 E
10455.00	2.19	114.84	S 65 9 E	0.03	10301.25	1329.4	160.6	1253.62 S	442.31 E
10460.00	2.20	114.55	S 65 27 E	0.01	10306.25	1329.5	160.6	1253.70 S	442.49 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
10465.00	2.19	114.22	S 65 47 E	0.02	10311.25	1329.6	160.6	1253.78 S	442.66 E
10470.00	2.19	113.88	S 66 7 E	0.01	10316.24	1329.8	160.5	1253.86 S	442.84 E
10475.00	2.19	113.48	S 66 31 E	0.02	10321.24	1329.9	160.5	1253.94 S	443.01 E
10480.00	2.21	113.61	S 66 23 E	0.02	10326.24	1330.0	160.5	1254.01 S	443.19 E
10485.00	2.23	113.68	S 66 19 E	0.02	10331.23	1330.2	160.5	1254.09 S	443.36 E
10490.00	2.24	113.53	S 66 28 E	0.02	10336.23	1330.3	160.5	1254.17 S	443.54 E
10495.00	2.26	113.28	S 66 43 E	0.02	10341.22	1330.4	160.5	1254.25 S	443.72 E
10500.00	2.28	113.04	S 66 58 E	0.03	10346.22	1330.6	160.5	1254.33 S	443.90 E
10505.00	2.30	112.99	S 67 1 E	0.02	10351.22	1330.7	160.5	1254.40 S	444.09 E
10510.00	2.32	113.00	S 67 0 E	0.02	10356.21	1330.8	160.5	1254.48 S	444.27 E
10515.00	2.33	113.75	S 66 15 E	0.03	10361.21	1331.0	160.5	1254.56 S	444.46 E
10520.00	2.33	113.75	S 66 15 E	0.00	10366.20	1331.1	160.5	1254.65 S	444.65 E
10525.00	2.31	113.49	S 66 31 E	0.02	10371.20	1331.2	160.5	1254.73 S	444.83 E
10530.00	2.30	112.94	S 67 3 E	0.02	10376.20	1331.4	160.5	1254.81 S	445.02 E
10535.00	2.30	113.37	S 66 38 E	0.02	10381.19	1331.5	160.5	1254.88 S	445.20 E
10540.00	2.30	113.27	S 66 44 E	0.00	10386.19	1331.7	160.5	1254.96 S	445.39 E
10545.00	2.29	113.27	S 66 44 E	0.01	10391.18	1331.8	160.5	1255.04 S	445.57 E
10550.00	2.31	112.71	S 67 17 E	0.03	10396.18	1331.9	160.4	1255.12 S	445.75 E
10555.00	2.33	111.86	S 68 8 E	0.04	10401.18	1332.1	160.4	1255.20 S	445.94 E
10560.00	2.36	111.16	S 68 50 E	0.04	10406.17	1332.2	160.4	1255.27 S	446.13 E
10565.00	2.39	110.78	S 69 13 E	0.03	10411.17	1332.3	160.4	1255.35 S	446.33 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
10570.00	2.41	110.12	S 69 53 E	0.03	10416.16	1332.5	160.4	1255.42 S	446.52 E
10575.00	2.41	110.18	S 69 49 E	0.01	10421.16	1332.6	160.4	1255.49 S	446.72 E
10580.00	2.41	110.40	S 69 36 E	0.01	10426.15	1332.7	160.4	1255.57 S	446.92 E
10585.00	2.41	110.54	S 69 28 E	0.01	10431.15	1332.9	160.4	1255.64 S	447.11 E
10590.00	2.44	110.80	S 69 12 E	0.03	10436.15	1333.0	160.4	1255.71 S	447.31 E
10595.00	2.47	110.19	S 69 48 E	0.04	10441.14	1333.1	160.4	1255.79 S	447.51 E
10600.00	2.46	110.53	S 69 28 E	0.02	10446.14	1333.3	160.4	1255.86 S	447.71 E
10605.00	2.43	111.02	S 68 59 E	0.04	10451.13	1333.4	160.4	1255.94 S	447.91 E
10610.00	2.39	111.64	S 68 22 E	0.05	10456.13	1333.6	160.4	1256.02 S	448.11 E
10615.00	2.36	111.75	S 68 15 E	0.03	10461.12	1333.7	160.4	1256.09 S	448.30 E
10620.00	2.34	112.19	S 67 48 E	0.02	10466.12	1333.8	160.4	1256.17 S	448.49 E
10625.00	2.33	112.05	S 67 57 E	0.01	10471.11	1334.0	160.3	1256.25 S	448.68 E
10630.00	2.34	112.25	S 67 45 E	0.01	10476.11	1334.1	160.3	1256.32 S	448.87 E
10635.00	2.35	112.07	S 67 56 E	0.02	10481.11	1334.2	160.3	1256.40 S	449.06 E
10640.00	2.35	112.16	S 67 51 E	0.00	10486.10	1334.4	160.3	1256.48 S	449.25 E
10645.00	2.36	111.95	S 68 3 E	0.01	10491.10	1334.5	160.3	1256.55 S	449.44 E
10650.00	2.39	111.95	S 68 3 E	0.03	10496.09	1334.7	160.3	1256.63 S	449.63 E
10655.00	2.40	111.74	S 68 15 E	0.02	10501.09	1334.8	160.3	1256.71 S	449.83 E
10660.00	2.41	111.76	S 68 15 E	0.01	10506.08	1334.9	160.3	1256.79 S	450.02 E
10665.00	2.43	111.64	S 68 22 E	0.02	10511.08	1335.1	160.3	1256.87 S	450.22 E
10670.00	2.45	111.73	S 68 16 E	0.02	10516.08	1335.2	160.3	1256.94 S	450.41 E
10675.00	2.46	112.22	S 67 47 E	0.02	10521.07	1335.4	160.3	1257.02 S	450.61 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
10680.00	2.48	112.51	S 67 29 E	0.03	10526.07	1335.5	160.3	1257.11 S	450.81 E
10685.00	2.49	112.98	S 67 1 E	0.02	10531.06	1335.6	160.3	1257.19 S	451.01 E
10690.00	2.50	113.25	S 66 45 E	0.02	10536.06	1335.8	160.3	1257.28 S	451.21 E
10695.00	2.50	113.42	S 66 35 E	0.01	10541.05	1335.9	160.3	1257.36 S	451.41 E
10700.00	2.51	113.43	S 66 34 E	0.01	10546.05	1336.1	160.2	1257.45 S	451.61 E
10705.00	2.52	113.54	S 66 28 E	0.01	10551.04	1336.2	160.2	1257.54 S	451.82 E
10710.00	2.51	113.69	S 66 18 E	0.01	10556.04	1336.4	160.2	1257.62 S	452.02 E
10715.00	2.52	113.54	S 66 28 E	0.01	10561.03	1336.5	160.2	1257.71 S	452.22 E
10720.00	2.50	113.98	S 66 1 E	0.03	10566.03	1336.7	160.2	1257.80 S	452.42 E
10725.00	2.47	113.87	S 66 8 E	0.02	10571.02	1336.8	160.2	1257.89 S	452.62 E
10730.00	2.45	115.07	S 64 56 E	0.06	10576.02	1337.0	160.2	1257.98 S	452.81 E
10735.00	2.47	115.14	S 64 52 E	0.01	10581.01	1337.1	160.2	1258.07 S	453.01 E
10740.00	2.47	115.03	S 64 58 E	0.01	10586.01	1337.3	160.2	1258.16 S	453.20 E
10745.00	2.48	114.82	S 65 11 E	0.02	10591.00	1337.4	160.2	1258.25 S	453.40 E
10750.00	2.49	114.83	S 65 10 E	0.01	10596.00	1337.6	160.2	1258.34 S	453.59 E
10755.00	2.50	114.50	S 65 30 E	0.02	10601.00	1337.8	160.2	1258.43 S	453.79 E
10760.00	2.52	114.52	S 65 29 E	0.02	10605.99	1337.9	160.2	1258.52 S	453.99 E
10765.00	2.54	114.28	S 65 43 E	0.02	10610.99	1338.1	160.2	1258.62 S	454.19 E
10770.00	2.53	114.36	S 65 39 E	0.01	10615.98	1338.2	160.2	1258.71 S	454.39 E
10775.00	2.52	114.01	S 65 59 E	0.02	10620.98	1338.4	160.1	1258.80 S	454.59 E
10780.00	2.50	113.72	S 66 17 E	0.02	10625.97	1338.5	160.1	1258.89 S	454.79 E
10785.00	2.50	113.67	S 66 20 E	0.01	10630.97	1338.7	160.1	1258.97 S	454.99 E

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API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
10790.00	2.49	113.18	S 66 49 E	0.02	10635.96	1338.8	160.1	1259.06 S	455.19 E
10795.00	2.47	112.51	S 67 29 E	0.03	10640.96	1339.0	160.1	1259.14 S	455.39 E
10800.00	2.46	111.44	S 68 34 E	0.05	10645.95	1339.1	160.1	1259.22 S	455.59 E
10805.00	2.46	110.15	S 69 51 E	0.06	10650.95	1339.2	160.1	1259.30 S	455.79 E
10810.00	2.46	109.30	S 70 42 E	0.04	10655.94	1339.4	160.1	1259.37 S	456.00 E
10815.00	2.46	108.94	S 71 4 E	0.02	10660.94	1339.5	160.1	1259.44 S	456.20 E
10820.00	2.47	108.73	S 71 16 E	0.02	10665.93	1339.7	160.1	1259.51 S	456.40 E
10825.00	2.49	108.91	S 71 5 E	0.02	10670.93	1339.8	160.1	1259.58 S	456.61 E
10830.00	2.50	109.04	S 70 58 E	0.01	10675.92	1339.9	160.1	1259.65 S	456.81 E
10835.00	2.52	108.98	S 71 1 E	0.02	10680.92	1340.1	160.1	1259.72 S	457.02 E
10840.00	2.51	109.38	S 70 37 E	0.02	10685.91	1340.2	160.1	1259.80 S	457.23 E
10845.00	2.53	109.90	S 70 6 E	0.03	10690.91	1340.3	160.0	1259.87 S	457.43 E
10850.00	2.51	110.49	S 69 30 E	0.03	10695.91	1340.5	160.0	1259.95 S	457.64 E
10855.00	2.56	109.68	S 70 19 E	0.06	10700.90	1340.6	160.0	1260.02 S	457.85 E
10860.00	2.61	109.56	S 70 26 E	0.05	10705.90	1340.8	160.0	1260.10 S	458.06 E
10865.00	2.65	109.31	S 70 42 E	0.05	10710.89	1340.9	160.0	1260.17 S	458.28 E
10870.00	2.69	109.51	S 70 30 E	0.04	10715.88	1341.1	160.0	1260.25 S	458.50 E
10875.00	2.73	109.95	S 70 3 E	0.05	10720.88	1341.2	160.0	1260.33 S	458.72 E
10880.00	2.78	110.14	S 69 52 E	0.04	10725.87	1341.4	160.0	1260.41 S	458.94 E
10885.00	2.77	110.06	S 69 56 E	0.01	10730.87	1341.5	160.0	1260.50 S	459.17 E
10890.00	2.80	110.31	S 69 41 E	0.04	10735.86	1341.7	160.0	1260.58 S	459.40 E

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A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
10895.00	2.79	111.13	S 68 52 E	0.04	10740.86	1341.8	160.0	1260.67 S	459.63 E
10900.00	2.80	111.52	S 68 29 E	0.02	10745.85	1342.0	160.0	1260.76 S	459.86 E
10905.00	2.80	112.07	S 67 56 E	0.03	10750.84	1342.2	160.0	1260.85 S	460.08 E
10910.00	2.79	113.30	S 66 42 E	0.06	10755.84	1342.3	159.9	1260.94 S	460.31 E
10915.00	2.78	114.17	S 65 50 E	0.05	10760.83	1342.5	159.9	1261.04 S	460.53 E
10920.00	2.76	115.04	S 64 58 E	0.04	10765.83	1342.7	159.9	1261.14 S	460.75 E
10925.00	2.75	115.67	S 64 20 E	0.03	10770.82	1342.8	159.9	1261.24 S	460.97 E
10930.00	2.75	116.21	S 63 48 E	0.03	10775.81	1343.0	159.9	1261.35 S	461.18 E
10935.00	2.70	117.82	S 62 11 E	0.09	10780.81	1343.2	159.9	1261.45 S	461.39 E
10940.00	2.65	119.35	S 60 39 E	0.08	10785.80	1343.4	159.9	1261.57 S	461.60 E
10945.00	2.62	120.31	S 59 41 E	0.06	10790.80	1343.5	159.9	1261.68 S	461.80 E
10950.00	2.58	121.18	S 58 49 E	0.05	10795.79	1343.7	159.9	1261.80 S	461.99 E
10955.00	2.55	122.21	S 57 47 E	0.06	10800.79	1343.9	159.9	1261.91 S	462.18 E
10960.00	2.53	122.57	S 57 26 E	0.03	10805.78	1344.1	159.9	1262.03 S	462.37 E
10965.00	2.50	123.09	S 56 55 E	0.04	10810.78	1344.2	159.9	1262.15 S	462.56 E
10970.00	2.47	123.57	S 56 26 E	0.04	10815.77	1344.4	159.9	1262.27 S	462.74 E
10975.00	2.45	123.93	S 56 4 E	0.02	10820.77	1344.6	159.9	1262.39 S	462.91 E
10980.00	2.45	124.24	S 55 46 E	0.01	10825.76	1344.8	159.9	1262.51 S	463.09 E
10985.00	2.47	124.29	S 55 43 E	0.02	10830.76	1344.9	159.9	1262.63 S	463.27 E
10990.00	2.50	124.37	S 55 38 E	0.03	10835.75	1345.1	159.8	1262.75 S	463.45 E
10995.00	2.52	124.53	S 55 28 E	0.02	10840.75	1345.3	159.8	1262.88 S	463.63 E
11000.00	2.54	124.51	S 55 30 E	0.02	10845.75	1345.5	159.8	1263.00 S	463.81 E

RECEIVED: Jun. 18, 2013

API Well Number: 43047523160000

A Gyrodata Directional Survey

QEP Energy Company
Lease: RW Well: 15C1-23B, 4-1/2" Casing
Location: HWD #8, Uintah County, Utah
Job Number: RM0113GCMW157

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg/ 5.0 ft	VERTICAL DEPTH feet	CLOSURE DIST. feet	CLOSURE AZIMUTH deg.	HORIZONTAL COORDINATES feet	
11030.00	2.54	124.51	S 55 30 E	0.00	10875.72	1346.6	159.8	1263.75 S	464.90 E

Final Station Closure: Distance: 1346.55 ft Az: 159.80 deg.

gyrodata

RECEIVED: Jun. 18, 2013

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: RED WASH

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: RW 15C1-23B

2. NAME OF OPERATOR: QEP ENERGY COMPANY

9. API NUMBER: 43047523160000

3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, Ut, 84078

PHONE NUMBER: 303 308-3068 Ext

9. FIELD and POOL or WILDCAT: RED WASH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1736 FSL 2534 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 23 Township: 07.0S Range: 23.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 11/30/2013	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

NO ACTIVITY ON THIS WELL DURING THE MONTH OF NOVEMBER 2013.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
December 02, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Valyn Davis	435 781-4369	Regulatory Affairs Analyst

SIGNATURE	DATE
N/A	12/2/2013

RECEIVED: Dec. 02, 2013

FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082

SUNDRY NOTICES AND REPORTS ON WELLS

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6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: RED WASH

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: RW 15C1-23B

2. NAME OF OPERATOR: QEP ENERGY COMPANY

9. API NUMBER: 43047523160000

3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, Ut, 84078

PHONE NUMBER: 303 595-5919 Ext

9. FIELD and POOL or WILDCAT: RED WASH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1736 FSL 2534 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 23 Township: 07.0S Range: 23.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 11/2/2015	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	✓ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

QEP Energy Company requests approval to recomplete the RW 15C1-23B by adding perforations to the Mesaverde formation. See attached procedure.

Accepted by the Utah Division of Oil, Gas and Mining

Date: October 22, 2015

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jan Nelson	435 781-4331	Permit Agent

SIGNATURE	DATE
N/A	10/21/2015

RECEIVED: Oct. 21, 2015

QEP Energy requests approval to recomplete the RW 15C1-23B by adding perforations to the Mesaverde formation as follows:

1. Set CFP at 9,956'.
2. Stage 1
    a. 9,934'- 9,936', 3spf, frac with slick water
    b. 9,924'-9,926', 3spf, frac with slick water
    c. 9,909'-9,911', 3spf, frac with slick water
    d. 9,867'-9,870', 3spf, frac with slick water
    e. 9,853'-9,856', 3spf, frac with slick water
    f. 9,840'-9,842', 3spf, frac with slick water
    g. 9,778'-9,780', 3spf, frac with slick water
3. Set CFP at 9,730'.
4. Stage 2
    a. 9,706'-9,710', 3spf, frac with slick water
    b. 9,662'-9,664', 3spf, frac with slick water
    c. 9,626'-9,628', 3spf, frac with slick water
    d. 9,612'-9,614', 3spf, frac with slick water
    e. 9,548'-9,552', 3spf, frac with slick water
    f. 9,488'-9,490', 3spf, frac with slick water
5. Set CFP at 9,452'.
6. Stage 3
    a. 9,430'-9,432', 3spf, frac with slick water
    b. 9,420'-9,422', 3spf, frac with slick water
    c. 9,390'-9,392', 3spf, frac with slick water
    d. 9,380'-9,382', 3spf, frac with slick water
    e. 9,346'-9,348', 3spf, frac with slick water
    f. 9,310'-9,312', 3spf, frac with slick water
    g. 9,250'-9,252', 3spf, frac with slick water
    h. 9,233'-9,235', 3spf, frac with slick water
7. Drill up top two plugs and return well to production.
8. Return to drill up the bottom plug and restore existing production after the frac fluid is recovered.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082

SUNDRY NOTICES AND REPORTS ON WELLS

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6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: RED WASH

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: RW 15C1-23B

2. NAME OF OPERATOR: QEP ENERGY COMPANY

9. API NUMBER: 43047523160000

3. ADDRESS OF OPERATOR: 11002 East 17500 South , Vernal, Ut, 84078

PHONE NUMBER: 303 595-5919 Ext

9. FIELD and POOL or WILDCAT: RED WASH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1736 FSL 2534 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESW Section: 23 Township: 07.0S Range: 23.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ✓ SUBSEQUENT REPORT — Date of Work Completion: 12/6/2015
- ☐ SPUD REPORT — Date of Spud:
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	✓ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

QEP Energy Company re-perforated the RW 15C1-23B Mesaverde formation. A short summary of the additional perforations is as follows: Stage 1 - 9218'-9428' (48 shots), Stage 2 - 9484'-9704' (48 shots), Stage 3 - 9774'-9933' (48 shots). The frac used 14,838 bbls slickwater and 536,480 lbs of proppant bulk sand. The well was returned to production on 12/06/2015. Please see the attached perforation summary, daily summary and completion summary.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
January 06, 2016

NAME (PLEASE PRINT) Laura Abrams

PHONE NUMBER 303 260-6745

TITLE Sr. Regualtory Affairs Analyst

SIGNATURE N/A

DATE 12/17/2015

RECEIVED: Dec. 17, 2015

RW 15C1-23B

AFE - DRL-CT (Completion), 4/7/2013 06:00

Well Name	Primary Job Type	Secondary Job Type	Objective	Start Date	Job End Date
RW 15C1-23B	AFE - DRL-CT (Completion)	DEVELOPMENT	AFE	4/7/2013	5/8/2013

RPT #	End Date	Cum Time Log (days)	Current Ops	Summary	Time Log Hrs (hr)	Created By
1	4/8/2013 06:00	0.25	Well shut in.	Swing over Schlumberger ELU. MU and RIH with GR-CCL-CBL-VDL logging tools and tag up at 10,991' (LC at 11,015'). Log up to 60' and noted TOC at 700' with good Cement bond (BHT 197*). POOH. RDMO Schlumberger ELU. SIW.	6.00	DFW_WV310User
2	4/26/2013 06:00	0.33	Well shut in.	NU 4 1/16" 10K Cameron frac stack. RU Colt pressure truck. Test frac stack and 4 ½" 11.6 # P-110 casing to 8,500 psi. Good test. Prep to perforate in morning. SIW. Frac scheduled for 5/3/2013. Waiting on construction.	2.00	seiffert.contractor
3	4/27/2013 06:00	0.42	Well shut in.	Swing over Lone Wolf ELU. MU and RIH with (4) 2', 2', 6' and 6' Lone Wolf ELU tag guns loaded 3 SPF and 120* phasing. Perforate stage #1 from 10,474' to 10,614'. POOH. SIW. Waiting to MIRU frac crew Tuesday. SIW. Frac scheduled for 5/3/2013.	2.00	seiffert.contractor
4	5/4/2013 06:00	0.54	Well shut in.	Frac stage #1. Plug and perf stage #2. SIW and SDFN.	3.00	seiffert.contractor
5	5/5/2013 06:00	0.64	Well shut in.	Frac stage #2. Set kill plug at 6,000' and bleed pressue to zero psi. SIW. RD HES stand pipes. Waiting on drill out.	2.25	seiffert.contractor
6	5/7/2013 06:00	1.16	M.I.R.U	5/6/13. M.I.R.U BASIN RIG #4. CHECK SICP=250. BLEED WELL DOWN. N,D FRAC TREE. N.U BOP'S. R.U COLT TO TEST BOP' TO 4500 #PSI. R.U FLOOR. TALLY & PICK UP BHA 185 JOINTS OF 2 3/8" L-80 TUBING. TAG KILL PLUG @6000'. R,U SWIVEL. DRILL PLUG OUT IN 15 MIN. TAKE A KICK OF 500 #PSI ON CASING & 400 #PSI ON PUMP. CONTINUED TO TALLY & PICK UP 65 JOINTS OF 2 3/8" L-80 TUBING. E.O.T @8095'. SHUT TUBING IN. TURN WELL OVER TO FLOW BACK CREW. CHANGE OUT TUBING TRAILERS. S.D.F.N	12.50	temptwilliams
7	5/8/2013 06:00	1.59	DRILL OUT REMAINING PLUG & FILL TO P.B.T.D	5/7/13. FCP=700, SITP=25. OPEN BOP'S UP. TALLY & PICK UP 70 JOINTS OF 2 3/8" L-80 TUBING TAG FRAC PLUG @10,310'. R.U SWIVEL DRILL PLUG OUT IN 25 MIN. N PRESSER INCREASE ON WELL. TALLY & PICK UP 18 JINTS TAG FILL TOP @10,880'. ROLL HOLE CLEAN WITH 109 BBL'S OF 2% KCL. SPOT 20 GALS OF CHEM TO E.O.T. POOH WITH 12 JOINT'S. MAKE UP TUBING HANGER LAND TUBING IN WELL HEAD. E.O.T @10,507.65'. R.D FLOOR. N.D BOP'S. DROP BALL DOWN TUBING. N.U WELL HEAD & FLOW LINE. PUMP 23 BBL'S TO SEAT BALL. PRESSER UP TO 2600 #PSI TO PUMP BIT OFF. TURN WELL OVER TO PRODUCTION. R.D FLOW BACK CREW & BASIN RIG #4.	10.50	temptwilliams

AFE - REC (Recomplete), 11/13/2015 06:00

Well Name	Primary Job Type	Secondary Job Type	Objective	Start Date	Job End Date
RW 15C1-23B	AFE - REC (Recomplete)		Perp for frac.	11/13/2015	

RPT #	End Date	Cum Time Log (days)	Current Ops	Summary	Time Log Hrs (hr)	Created By
1	11/14/2015 06:00			CONTRACT WORK		10791
2	11/17/2015 06:00			CONTRACT WORK		10791
3	11/25/2015 06:00			CONTRACT WORK		10791

RECEIVED: Dec. 17, 2015

RW 15C1-23B

RPT #	End Date	Cum Time Log (days)	Current Ops	Summary	Time Log Hrs (hr)	Created By
4	12/1/2015 06:00	0.54	MIRU	11/30/2015: MIRU ND well head, NU Bop's Pull hanger. POOH w/ tbg. Pump 30 bbls to control gas. SDFN	13.00	tempmcclure
5	12/2/2015 06:00	1.08	Top kill casing	12/1/2015: Top kill casing w/ 25 bbl's -2% KCL. RIH w/ scrapper to 10071' POOH w/ tbg. ND bop's, NU Frac tree. Shut well in,	13.00	tempmcclure
6	12/3/2015 06:00	1.58	RU W.L.	12/2/2015: RU W.L. , RIH and set 15k CFP @ 9956' Plug set , Tool did not sheer from plug, Work W.L Several times try to work free. w/ No success. Pull out of rope socket. RU Braided cable truck. RIH w/ jars Jar tool free from plug. POOH w/ fish. Fill hole w/ 127 bbl's Pressure test casing to 8550# psi Good test and charted. RIH w/ 3 1/8 guns and shot perfs as per design SWI, RD W.L, SDFN	12.00	tempmcclure
7	12/4/2015 06:00	2.08	MIRU HES frac equipment.	MIRU HES frac equipment.	12.00	browning.contractor
8	12/5/2015 06:00	2.79	Frac stage #1.	Frac stage #1. Plug/perf and frac stage #2 and #3. Set kill plug @ 5,000'. RDMO Cutters ELU and HES Frac equipment. Secure well. SDFN.	17.00	browning.contractor
9	12/6/2015 06:00	3.23	ND frac tree	12/5/2015: Bleed well off. ND frac tree. NU 5k bop's. RU floor & 2 3/8" tbg equip. Tally and make up 3 5/8" mill, pump off bit sub, 1.810 F-nipple, 156 joint's of 2 3/8" L-80 tbg. Tag up on kill plug @5000'. RU swivel and rig pump. Hold 600 #psi back pressure on casing. Drill plug out in 15 min. Take a kick of 1200 #psi. Stand swivel back. Tally RIH tag up on fil top @9425'. Pooh LD 20 joint's. EOT @8809'. Shut and lock pipe ram's & tubing. Drain pump and line's. RU tarp & heater to well head. Turn casing over to flow back crew. Clean up. SDFN	10.50	tempmcclure
10	12/7/2015 06:00	3.69	RIH w/ tbg	12/6/2015: Drill out Plugs @ 9452' 9725', Clean out to 15k @ 9956' Leaving 15k plug, LD 24 jts Land well w/ EOT @ 9200'ND bops NU well head. Tbg is shut in. Turn casing over to Weatherford.	11.00	tempmcclure
11	12/11/2015 06:00	3.79	MIRU wire line	12/10/15: MIRU PLS wire line. RIH and per tbg @9176'. Pooh RD wire line. Shut well in for swab unit.	2.50	temptwilliams
12	12/15/2015 06:00	3.79		REPAIRS AND MAINTENANCE		50379

RECEIVED: Dec. 17, 2015

Daily Summary

Well Name: RW 15C1-23B

API	Surface Legal Location	Field Name	County	State	Well Configuration Type
43-047-52316	S23-T7S-R23E	RED WASH	UINTAH	UTAH	S-Well

Unique Well ID	Ground Elevation (ft)	Casing Flange Elevation (ft)	Current KB to GL (ft)	KB to CF (ft)	Spud Date	Dry Hole TD Date
UT102607	5,625.3	5,625.30	15.50	15.50	10/9/2012 05:00	1/26/2013 22:00

RPT #	Start Date	End Date	Summary
1	11/13/2015	11/14/2015	CONTRACT WORK
2	11/16/2015	11/17/2015	CONTRACT WORK
3	11/24/2015	11/25/2015	CONTRACT WORK
4	11/30/2015	12/1/2015	11/30/2015: MIRU ND well head, NU Bop's Pull hanger. POOH w/ tbg. Pump 30 bbls to control gas. SDFN
5	12/1/2015	12/2/2015	12/1/2015: Top kill casing w/ 25 bbl's -2% KCL. RIH w/ scrapper to 10071' POOH w/ tbg. ND bop's, NU Frac tree. Shut well in,
6	12/2/2015	12/3/2015	12/2/2015: RU W.L. , RIH and set 15k CFP @ 9956' Plug set , Tool did not sheer from plug, Work W.L Several times try to work free. w/ No success. Pull out of rope socket. RU Braided cable truck. RIH w/ jars Jar tool free from plug. POOH w/ fish. Fill hole w/ 127 bbl's Pressure test casing to 8550# psi Good test and charted. RIH w/ 3 1/8 guns and shot perfs as per design SWI, RD W.L, SDFN
7	12/3/2015	12/4/2015	MIRU HES frac equipment.
8	12/4/2015	12/5/2015	Frac stage #1. Plug/perf and frac stage #2 and #3. Set kill plug @ 5,000'. RDMO Cutters ELU and HES Frac equipment. Secure well. SDFN.
9	12/5/2015	12/6/2015	12/5/2015: Bleed well off. ND frac tree. NU 5k bop's. RU floor & 2 3/8" tbg equip. Tally and make up 3 5/8" mill, pump off bit sub, 1.810 F-nipple, 156 joint's of 2 3/8" L-80 tbg. Tag up on kill plug @5000'. RU swivel and rig pump. Hold 600 #psi back pressure on casing. Drill plug out in 15 min. Take a kick of 1200 #psi. Stand swivel back. Tally RIH tag up on fil top @9425'. Pooh LD 20 joint's. EOT @8809'. Shut and lock pipe ram's & tubing. Drain pump and line's. RU tarp & heater to well head. Turn casing over to flow back crew. Clean up. SDFN
10	12/6/2015	12/7/2015	12/6/2015: Drill out Plugs @ 9452' 9725', Clean out to 15k @ 9956' Leaving 15k plug, LD 24 jts Land well w/ EOT @ 9200'ND bops NU well head. Tbg is shut in. Turn casing over to Weatherford.
11	12/10/2015	12/11/2015	12/10/15: MIRU PLS wire line. RIH and per tbg @9176'. Pooh RD wire line. Shut well in for swab unit.
12	12/14/2015	12/15/2015	REPAIRS AND MAINTENANCE

RECEIVED: Dec. 17, 2015

Perforations

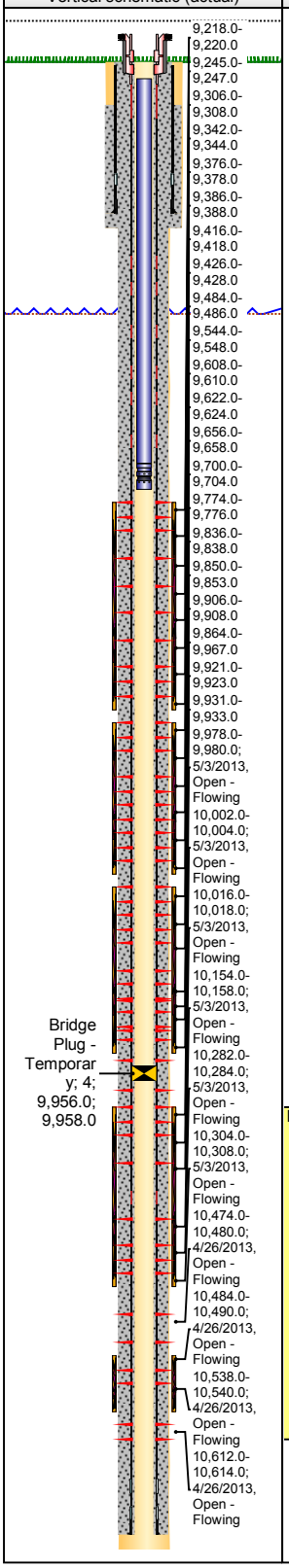
Well Name: RW 15C1-23B

API	Surface Legal Location	Field Name	County	State	Well Configuration Type
43-047-52316	S 23-T7S-R23E	RED WASH	UINTAH	UTAH	S-Well

Unique Well ID	Gr Elev (ft)	Current Elevation	KB to CF (ft)	Spud Date	Dry Hole TD Date	Total Depth (All) (ft, KB)
UT102607	5,625.3	5,640.80, HWD 8 - KB 15	15.50	10/9/2012 05:00	1/26/2013 22:00	ORIGINAL HOLE - 11,030.0

S-Well - ORIGINAL HOLE, 12/17/2015 3:21:02 PM

Vertical schematic (actual) | Zone (Completion Interval)



Perforations

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,218	9,220

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,000	1,900

Reference Log:

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,245	9,247

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,000	1,900

Reference Log:

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,306	9,308

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,000	1,900

Reference Log:

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,342	9,344

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,000	1,900

Reference Log:

Type: Perforated

RECEIVED: Dec. 17, 2015

Perforations

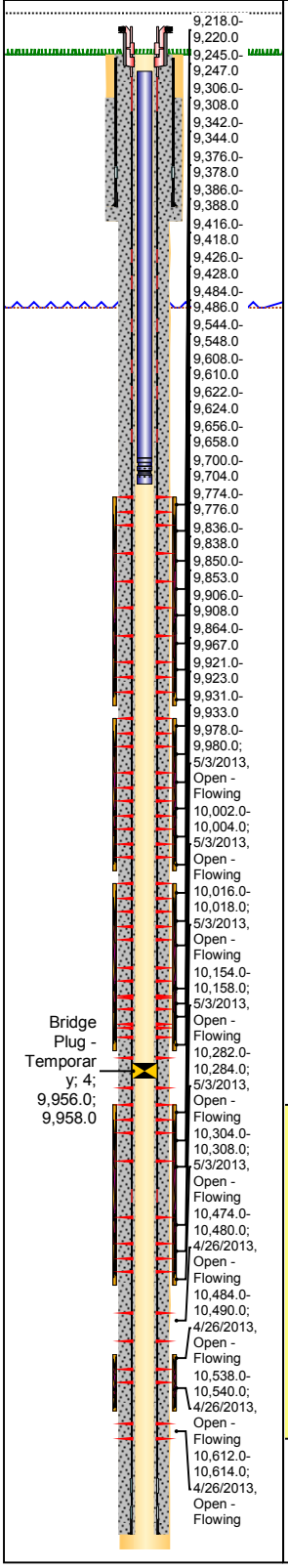
Well Name: RW 15C1-23B

API	Surface Legal Location	Field Name	County	State	Well Configuration Type
43-047-52316	S 23-T7S-R23E	RED WASH	UINTAH	UTAH	S-Well

Unique Well ID	Gr Elev (ft)	Current Elevation	KB to CF (ft)	Spud Date	Dry Hole TD Date	Total Depth (All) (ft, KB)
UT102607	5,625.3	5,640.80, HWD 8 - KB 15	15.50	10/9/2012 05:00	1/26/2013 22:00	ORIGINAL HOLE - 11,030.0

S-Well - ORIGINAL HOLE, 12/17/2015 3:21:02 PM

Vertical schematic (actual)



Zone (Completion Interval)

MESAVERDE

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,376	9,378

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,000	1,900

Reference Log

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,386	9,388

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,000	1,900

Reference Log

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,416	9,418

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,000	1,900

Reference Log

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,426	9,428

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,000	1,900

Reference Log

Type: Perforated

RECEIVED: Dec. 17, 2015

Perforations

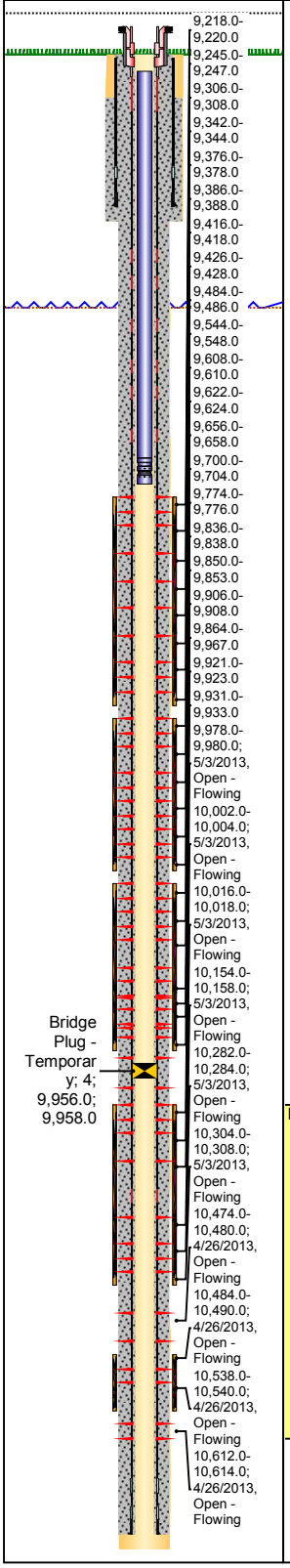
Well Name: RW 15C1-23B

API	Surface Legal Location	Field Name	County	State	Well Configuration Type
43-047-52316	S 23-T7S-R23E	RED WASH	UINTAH	UTAH	S-Well

Unique Well ID	Gr Elev (ft)	Current Elevation	KB to CF (ft)	Spud Date	Dry Hole TD Date	Total Depth (All) (ft, KB)
UT102607	5,625.3	5,640.80, HWD 8 - KB 15	15.50	10/9/2012 05:00	1/26/2013 22:00	ORIGINAL HOLE - 11,030.0

S-Well - ORIGINAL HOLE, 12/17/2015 3:21:02 PM

Vertical schematic (actual)



Zone (Completion Interval)

MESAVERDE

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,484	9,486

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,500	9,484

Reference Log

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,544	9,548

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,500	9,484

Reference Log

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,608	9,610

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,500	9,484

Reference Log

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,622	9,624

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,500	9,484

Reference Log

Type: Perforated

RECEIVED: Dec. 17, 2015

Perforations

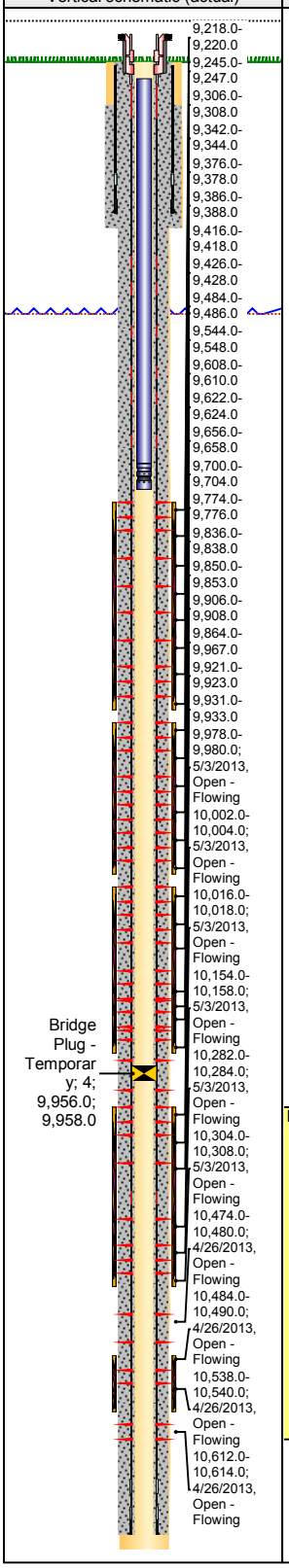
Well Name: RW 15C1-23B

API	Surface Legal Location	Field Name	County	State	Well Configuration Type
43-047-52316	S 23-T7S-R23E	RED WASH	UINTAH	UTAH	S-Well

Unique Well ID	Gr Elev (ft)	Current Elevation	KB to CF (ft)	Spud Date	Dry Hole TD Date	Total Depth (All) (ft, KB)
UT102607	5,625.3	5,640.80, HWD 8 - KB 15	15.50	10/9/2012 05:00	1/26/2013 22:00	ORIGINAL HOLE - 11,030.0

S-Well - ORIGINAL HOLE, 12/17/2015 3:21:02 PM

Vertical schematic (actual)



Zone (Completion Interval)

MESAVERDE

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,656	9,658

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,500	9,484

Reference Log:

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/4/2015	MESAVERDE, ORIGINAL HOLE	9,700	9,704

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				2,500	9,484

Reference Log:

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/2/2015	MESAVERDE, ORIGINAL HOLE	9,774	9,776

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Cutters	Wireline	3 1/8	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				0	0

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/2/2015	MESAVERDE, ORIGINAL HOLE	9,836	9,838

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Cutters	Wireline	3 1/8	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				0	0

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

RECEIVED: Dec. 17, 2015

Perforations

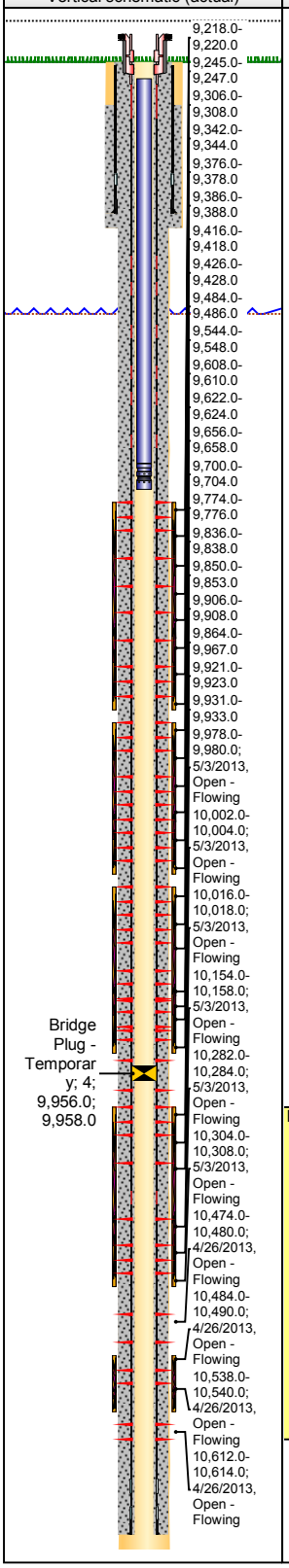
Well Name: RW 15C1-23B

API	Surface Legal Location	Field Name	County	State	Well Configuration Type
43-047-52316	S 23-T7S-R23E	RED WASH	UINTAH	UTAH	S-Well

Unique Well ID	Gr Elev (ft)	Current Elevation	KB to CF (ft)	Spud Date	Dry Hole TD Date	Total Depth (All) (ft, KB)
UT102607	5,625.3	5,640.80, HWD 8 - KB 15	15.50	10/9/2012 05:00	1/26/2013 22:00	ORIGINAL HOLE - 11,030.0

S-Well - ORIGINAL HOLE, 12/17/2015 3:21:02 PM

Vertical schematic (actual)



Zone (Completion Interval)

MESAVERDE

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/2/2015	MESAVERDE, ORIGINAL HOLE	9,850	9,853

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Cutters	Wireline	3 1/8	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				0	0

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/2/2015	MESAVERDE, ORIGINAL HOLE	9,864	9,967

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Cutters	Wireline	3 1/8	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				0	0

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/2/2015	MESAVERDE, ORIGINAL HOLE	9,906	9,908

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Cutters	Wireline	3 1/8	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				0	0

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/2/2015	MESAVERDE, ORIGINAL HOLE	9,921	9,923

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Cutters	Wireline	3 1/8	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				0	0

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

RECEIVED: Dec. 17, 2015

Perforations

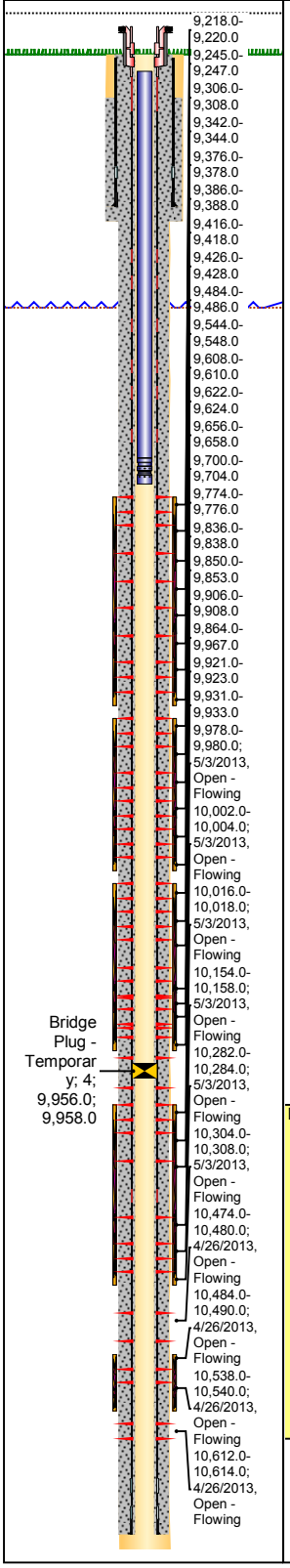
Well Name: RW 15C1-23B

API	Surface Legal Location	Field Name	County	State	Well Configuration Type
43-047-52316	S 23-T7S-R23E	RED WASH	UINTAH	UTAH	S-Well

Unique Well ID	Gr Elev (ft)	Current Elevation	KB to CF (ft)	Spud Date	Dry Hole TD Date	Total Depth (All) (ft, KB)
UT102607	5,625.3	5,640.80, HWD 8 - KB 15	15.50	10/9/2012 05:00	1/26/2013 22:00	ORIGINAL HOLE - 11,030.0

S-Well - ORIGINAL HOLE, 12/17/2015 3:21:02 PM

Vertical schematic (actual)



Zone (Completion Interval)

MESAVERDE

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
12/2/2015	MESAVERDE, ORIGINAL HOLE	9,931	9,933

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Cutters	Wireline	3 1/8	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0		120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)
				0	0

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
5/3/2013	MESAVERDE, ORIGINAL HOLE	9,978	9,980

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Lone Wolf ELU	Wireline	2.752	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0	HSC	120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com
5/3/2013	Open - Flowing	

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
5/3/2013	MESAVERDE, ORIGINAL HOLE	10,002	10,004

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Lone Wolf ELU	Wireline	2.752	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0	HSC	120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com
5/3/2013	Open - Flowing	

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
5/3/2013	MESAVERDE, ORIGINAL HOLE	10,016	10,018

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Lone Wolf ELU	Wireline	2.752	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0	HSC	120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

RECEIVED: Dec. 17, 2015

Perforations

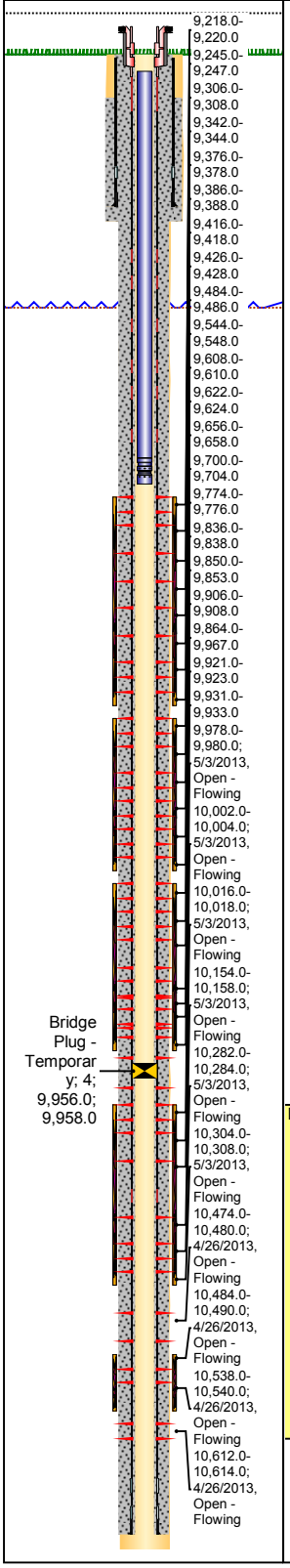
Well Name: RW 15C1-23B

API	Surface Legal Location	Field Name	County	State	Well Configuration Type
43-047-52316	S 23-T7S-R23E	RED WASH	UINTAH	UTAH	S-Well

Unique Well ID	Gr Elev (ft)	Current Elevation	KB to CF (ft)	Spud Date	Dry Hole TD Date	Total Depth (All) (ft, KB)
UT102607	5,625.3	5,640.80, HWD 8 - KB 15	15.50	10/9/2012 05:00	1/26/2013 22:00	ORIGINAL HOLE - 11,030.0

S-Well - ORIGINAL HOLE, 12/17/2015 3:21:03 PM

Vertical schematic (actual)



Zone (Completion Interval)

MESAVERDE

Perforation Statuses

Date	Status	Com
5/3/2013	Open - Flowing	

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
5/3/2013	MESAVERDE, ORIGINAL HOLE	10,154	10,158

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Lone Wolf ELU	Wireline	2.752	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0	HSC	120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com
5/3/2013	Open - Flowing	

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
5/3/2013	MESAVERDE, ORIGINAL HOLE	10,282	10,284

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Lone Wolf ELU	Wireline	2.752	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0	HSC	120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com
5/3/2013	Open - Flowing	

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
5/3/2013	MESAVERDE, ORIGINAL HOLE	10,304	10,308

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Lone Wolf ELU	Wireline	2.752	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0	HSC	120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com
5/3/2013	Open - Flowing	

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
4/26/2013	MESAVERDE, ORIGINAL HOLE	10,474	10,480

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Lone Wolf ELU	Wireline	2.752	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0	HSC	120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

RECEIVED: Dec. 17, 2015

Perforations

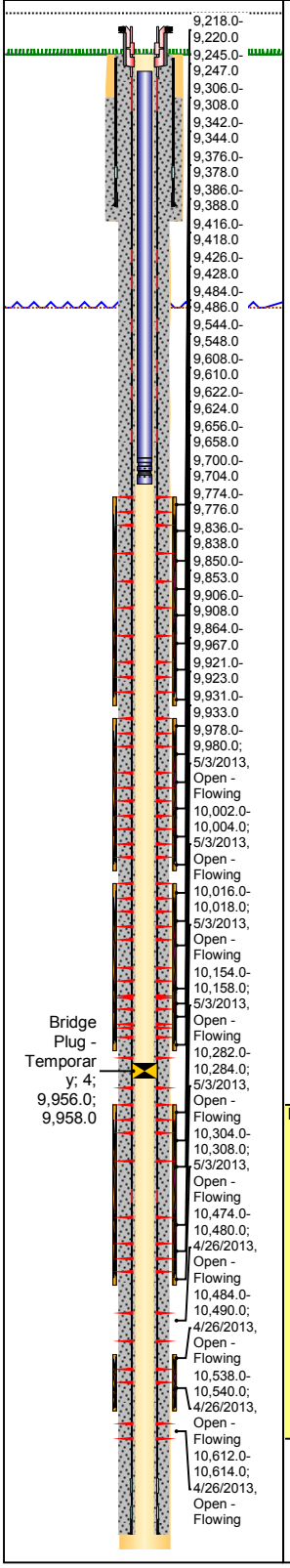
Well Name: RW 15C1-23B

API	Surface Legal Location	Field Name	County	State	Well Configuration Type
43-047-52316	S 23-T7S-R23E	RED WASH	UINTAH	UTAH	S-Well

Unique Well ID	Gr Elev (ft)	Current Elevation	KB to CF (ft)	Spud Date	Dry Hole TD Date	Total Depth (All) (ft, KB)
UT102607	5,625.3	5,640.80, HWD 8 - KB 15	15.50	10/9/2012 05:00	1/26/2013 22:00	ORIGINAL HOLE - 11,030.0

S-Well - ORIGINAL HOLE, 12/17/2015 3:21:03 PM

Vertical schematic (actual) | Zone (Completion Interval)



Perforation Statuses

Date	Status	Com
4/26/2013	Open - Flowing	

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
4/26/2013	MESAVERDE, ORIGINAL HOLE	10,484	10,490

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Lone Wolf ELU	Wireline	2.752	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0	HSC	120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com
4/26/2013	Open - Flowing	

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
4/26/2013	MESAVERDE, ORIGINAL HOLE	10,538	10,540

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Lone Wolf ELU	Wireline	2.752	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0	HSC	120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com
4/26/2013	Open - Flowing	

Date	Linked Zone	Top Depth (ft, KB)	Bottom Depth (ft, KB)
4/26/2013	MESAVERDE, ORIGINAL HOLE	10,612	10,614

Perforation Company	Conveyance Method	Gun Size (in)	Carrier Make
Lone Wolf ELU	Wireline	2.752	

Shot Density (shots/ft)	Charge Type	Phasing (°)
3.0	HSC	120

Orientation	Orientation Method

Over/Under Balanced	P Over/Under (psi)	FL MD Before (ft, KB)	FL MD After (ft, KB)	P Surf Init (psi)	P Final Surf (psi)

Reference Log: Cement Bond, 60.0-10,982.0ft, KB

Type: Perforated

Perforation Statuses

Date	Status	Com
4/26/2013	Open - Flowing	

RECEIVED: Dec. 17, 2015